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Outcomes of the regional implementation meetings for the eighteenth session of the Commission on Sustainable Development

Note by the secretariat

1. The Plan of Implementation of the World Summit on Sustainable Development ("Johannesburg Plan of Implementation"), adopted at the World Summit for Sustainable Development in 2002, stated that the implementation of Agenda 21, the Programme for Further Implementation of Agenda 21 and the outcomes of the Summit should be effectively pursued at the regional and subregional levels, through the United Nations regional commissions and other regional and subregional institutions and bodies.

2. The Commission on Sustainable Development, at its eleventh session, invited the regional commissions, in collaboration with the secretariat of the Commission, to consider organizing regional implementation meetings in order to contribute to the work of the Commission, in accordance with the relevant provisions of the Johannesburg Plan of Implementation and in collaboration with other regional and subregional organizations and bodies, as appropriate, as well as the regional offices of funds, programmes and international finance and trade institutions and other organizations and bodies of the United Nations system. Such meetings should preferably be held before the review session of the Commission and should:

(a) Contribute to advancing the implementation of Agenda 21, the Programme for the Further Implementation of Agenda 21 and the Johannesburg Plan of Implementation;

(b) Focus on the thematic cluster of issues to be addressed in the ongoing implementation cycle;

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(c) Provide input to the report of the Secretary-General and the sessions of the Commission. Those inputs may include identification of obstacles and constraints, new challenges and opportunities related to the implementation of Agenda 21, the Programme for the Further Implementation of Agenda 21 and the Johannesburg Plan of Implementation, and sharing of lessons learned and best practices;

(d) Provide for contributions from major groups, taking into account paragraphs 139 (g) and 149 (c) and (d) of the Johannesburg Plan of Implementation.

3. Pursuant to the invitation of the Commission on Sustainable Development all United Nations regional commissions organized regional implementation meetings in their respective regions prior to the twelfth, fourteenth and sixteenth sessions of the Commission. The regional implementation meetings were organized within the framework of relevant regional forums or as separate meetings. The outcome documents of the regional implementation meetings provided input to the Secretary-General's reports and created a good basis for the regional discussions held during the twelfth, fourteenth and sixteenth sessions of the Commission.

4. At its eighteenth session, the Commission will undertake a review of progress achieved at all levels in the implementation of commitments, targets and goals on the thematic cluster transport, chemicals, waste management, mining and the 10-year framework of programmes on sustainable consumption and production patterns. As a contribution to the review, the regional commissions, in collaboration with the secretariat of the Commission and other regional and subregional organizations, organized the following regional implementation meetings:

(a) For Africa, in Addis Ababa, from 27 to 30 October 2009, within the framework of the sixth session of the Committee on Food Security and Sustainable Development (see E/CN.17/2010/10/Add.1);

(b) For Asia and the Pacific, in Bangkok, from 30 November to 1 December 2009 (see E/CN.17/2010/10/Add.2);

(c) For Europe and North America, in Geneva, on 1 and 2 December 2009 (see E/CN.17/2010/10/Add.3);

(d) For Latin America and the Caribbean, in La Antigua, Guatemala, on 26 and 27 November 2009 (see E/CN.17/2010/10/Add.4);

(e) For Western Asia, in Cairo, from 4 to 6 October 2009, in association with the eleventh session of the Joint Committee on Environment and Development in the Arab Region (see E/CN.17/2010/10/Add.5).

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Report of the regional implementation meeting for Africa**

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I. Introduction

1. In preparation for the eighteenth session of the Commission on Sustainable Development, the Economic Commission for Africa (ECA), in collaboration with the Department for Economic and Social Affairs, the United Nations Environment Programme (UNEP) and the United Nations Industrial Development Programme (UNIDO), organized the Africa regional implementation meeting in Addis Ababa from 27 to 30 October 2009. The meeting was held under the auspices of the sixth session of the ECA Committee on Food Security and Sustainable Development, whose theme was, "Sustainable consumption and production for sustainable growth and poverty reduction in Africa".

2. The regional implementation meeting reviewed progress made by African countries in the implementation of commitments contained in Agenda 21, the Programme for the Further Implementation of Agenda 21 and the Johannesburg Plan of Implementation of the World Summit on Sustainable Development, focusing on the thematic cluster of issues to be considered by the Commission on Sustainable Development during the 2010/2011 cycle: namely: transport; chemicals; waste management; mining; and sustainable consumption and production, including a 10-year framework of programmes on sustainable consumption and production. The meeting also reflected on and identified main implementation challenges and constraints, lessons learned and the way forward, including policy measures and actions needed to accelerate implementation.

3. In order to facilitate the review, the regional implementation meeting had before it background documents, including regional reports reviewing the various thematic issues to be considered at the eighteenth session. The review reports provide more details on implementation progress in the five thematic cluster of issues. The reports, which will serve as reference documents for the deliberations at the eighteenth session, will be disseminated to member States, African regional and subregional organizations and all relevant stakeholders.

4. The present report constitutes the statement of the regional implementation meeting for Africa to the Commission on Sustainable Development at its eighteenth session.

II. Preamble

5. The participants at the meeting adopted the following preamble:

We, the representatives of African member States, intergovernmental organizations and major groups,

Having met in Addis Ababa from 27 to 30 October 2009 at the regional implementation meeting for Africa for the eighteenth session of the Commission on Sustainable Development,

Recalling and reaffirming the commitments on sustainable development made by African countries at major United Nations conferences and summits, notably at the United Nations Conference on Environment and Development in 1992, the General Assembly five-year review of the implementation of the outcomes of the United Nations Conference on Environment and Development in 1997, the Millennium Summit and the World Summit on Sustainable

Development in 2002, as well as those contained in multilateral environment agreements and African Union summit declarations and decisions,

Also recalling and expressing support for various initiatives undertaken by African countries at regional and national levels to domesticate and translate into action the various internationally agreed goals and commitments on sustainable development,

Expressing deep concern over the continuing, and in many cases worsening, multiple social, economic and environmental challenges that confront African countries, and in particular the complex and interlinked challenges of persistent and widespread poverty, food and energy insecurity, poor stewardship of environmental and natural resources, as well as the current financial crisis and their negative impacts on Africa's sustainable development efforts,

Expressing concern that, despite being the least responsible for climate change, Africa will be worst hit by its impacts, which are already being felt in the region, and further, noting that climate change threatens to erode hard-won development gains and complicate efforts aimed at sustainable development,

Stressing that the multiple sustainable development challenges confronting the region require urgent actions, as well as coordinated and integrated approaches at all levels that take into consideration the continent's legitimate sustainable development concerns,

Underscoring the centrality of achieving more sustainable consumption and production pathways, underpinned by peace, security and good governance and gender-responsive policies, to effectively respond to these challenges,

Hereby affirm as follows:

1. The region has made progress in promoting sustainable consumption and production, as demonstrated by the establishment of a regional institutional mechanism, which provides technical support in promoting sustainable consumption and production in Africa and the adoption of the regional 10-year framework of programmes on sustainable consumption and production by the African Ministerial Conference on the Environment. This framework is playing an important role in catalysing regional, national and local initiatives and actions on sustainable consumption and production, while the capacity created through the national cleaner production centres and the Africa round table on sustainable consumption and production is providing a platform for effective delivery and implementation;

2. Owing to trade liberalization and diversified and expanded economic activities, among other factors, an increasing number of African countries are importing, producing and using chemicals and products containing chemicals, in particular pesticides. However, many countries in the region lack the capacity necessary for the sound management of chemicals, including assessment and monitoring the risks associated with trade in chemicals and chemicals contained in products. Furthermore, the region lacks adequate capacity for the sound management of chemicals throughout their life

cycle, including disposal, hence the urgent need to build capacity in sustainable chemicals control and management in Africa;

3. Inappropriate waste management practices, in particular the widespread dumping of waste in bodies of water and uncontrolled dump sites, compounds the problem of low access to sanitation facilities and portable water across the region. In this regard, adequate priority should be accorded to waste management programmes, in particular the management of hazardous wastes, in national development policies and programmes, including the development of appropriate waste management infrastructure;

4. Africa has made progress in improving mining regulatory frameworks. Notwithstanding, there is need to do more to ensure that mining regimes in Africa contribute to the creation of equitable and sustainable mineral wealth from the viewpoint of a diversified mining industry. This should be integrated into the local, national and regional economies through optimized linkages that do not compromise other forms of land use, including environmental, social and cultural considerations;

5. Transport is a crucial driver of sustainable development. Integrated transport systems are a key component that is needed in Africa to facilitate connectivity, access and trade for sustainable economic growth. However, African countries face huge transportation-related costs. On average, Africa's transport and insurance costs represent 30 per cent of the total value of exports, which compares unfavourably with 8.6 per cent for all developing countries. The high number of deaths associated with road transport accidents is of grave concern. In addition, respiratory diseases associated with inefficient and out-dated transport technology are increasing. Therefore, there is an urgent need for enhanced support and investment in developing safe, energy-efficient, health- and environment-friendly transport infrastructure and modes of transportation;

6. Africa's development partners have been providing invaluable support to facilitate the development and implementation of strategies and programmes at regional, national and local levels aimed at fulfilling commitments in the thematic cluster of issues under consideration. Major groups, including business, civil society, women, youth and indigenous people, have also been very active in supporting Africa's actions towards this end. However, while countries have taken a number of actions and made some progress to fulfil commitments in relation to the issues under consideration, much remains to be done. The emergence of new challenges, such as the current food crisis and high food prices, as well as the financial meltdown, has hampered implementation progress;

7. Section III below highlights progress and achievements in the implementation of commitments on chemicals, waste management, mining, transport and sustainable consumption and production including the 10-year framework of programmes on sustainable consumption and production. It outlines implementation challenges and constraints, as well as lessons learned and the way forward, including policy measures and actions needed to accelerate implementation in each of the thematic issues.

III. Review of implementation progress, challenges and constraints and the way forward

A. Sustainable consumption and production, including the 10-year framework of programmes for sustainable consumption and production

1. Actions taken and progress made

6. The African 10-year framework of programmes on sustainable consumption and production has been launched. The programme has a strategic focus linking sustainable consumption and production with the challenges of meeting basic needs in a more sustainable manner.

7. A regional institutional mechanism, the Africa round table on sustainable consumption and production, which provides technical support in promoting sustainable consumption and production in Africa, has been established.

8. A number of projects are being implemented within the framework of the 10-year framework of programmes on sustainable consumption and production, including the Africa eco-labelling project, which focuses on the development of an African eco-labelling mechanism and the development of national and local programmes on sustainable consumption and production in selected countries.

9. Within the context of the broader goals on sustainable consumption and production, a number of initiatives have been, or are in the process of being, realized:

(a) An initial set of national cleaner production centres have been established in 11 countries in Africa to promote resource efficient and cleaner production, with the joint support of UNEP and UNIDO;

(b) In addition to several regional energy-infrastructure projects aimed at increasing access to energy, off-grid systems based on renewable energy have been developed in the rural areas of many countries;

(c) African business organizations are participating in the Global Compact initiative, which embodies social and environmental responsibility principles that are consistent with sustainable consumption and production goals. In addition, several companies are members of the World Business Council on Sustainable Development;

(d) Several measures have been taken at local, national, subregional and regional levels towards increased and sustainable agricultural production, including an increasing number of initiatives in organic food production and consumption.

2. Challenges and constraints to implementation

10. The main challenges and constraints in the development and implementation of sustainable consumption and production programmes and activities include the following:

(a) Inadequate awareness and knowledge of the benefits of sustainable consumption and production, as well as limited human, technical and institutional capacities in the subject area;

(b) Inadequate policies, strategies and legislation on sustainable consumption and production, and poor enforcement where they exist;

(c) Under-pricing of natural resources and low recognition of sustainable consumption and production in most policies;

(d) The implementation of sustainable consumption and production in a fragmented and isolated manner; few economic and other marked-based instruments are in use and little progress has been made in their application to the area of sustainable public procurement;

(e) Inadequate financial incentives and appropriate financing mechanisms for sustainable consumption and production investment and the financial and institutional instability of national cleaner production centres, as well as limited network coverage across Africa.

3. Lessons learned and the way forward

11. Political will and commitment is essential for the effective implementation of the African 10-year framework of programmes on sustainable consumption and production. The organizational support provided by UNEP, together with the political leadership and support provided by the African Ministerial Conference on the Environment and the financial support provided by the Marrakech Task Force on Cooperation with Africa, have been instrumental for the achievements registered so far.

12. A coherent and integrated national strategy to promote sustainable consumption and production using a range of policies and actions, including eco-fair labelling, is needed to bring about holistic patterns of sustainable consumption and production. Furthermore, national strategies need to be formulated as integral priorities of national strategies for sustainable development, including poverty reduction strategies and national environmental action plans.

13. The effective development and implementation of sustainable consumption and production in African countries could be significantly facilitated through its mainstreaming into the priorities and decision-making criteria of development financing agencies.

14. Visible implementation of activities in this area at an early stage is important to demonstrate and popularize the concept of sustainable consumption and production.

15. In order to make further progress on sustainable lifestyles, there is a need for massive multimedia education and awareness campaigns to inspire action for change to sustainable lifestyles. Mobilization and active involvement of the private sector, non-governmental organizations and other civil society organizations is vital in strengthening advocacy and investments in sustainable consumption and production initiatives.

16. National cleaner production centres need to be upscaled, and their networks expanded, to cover the entire continent. Moreover, resource-efficient and cleaner production needs to be mainstreamed into national development programmes as a way of fostering sustainable development.

17. In the context of the implementation challenges and lessons learned, the region has identified and prioritized a number of concrete actions and projects for urgent support from development partners, namely capacity-building for the development and implementation national sustainable consumption and production action plans; implementation of an African local sustainable consumption and production initiative; implementation of a regional programme on resource-efficient and cleaner production, involving building the capacities of the national cleaner production centres and sustainable consumption and production bodies; strengthening the African eco-labelling mechanism; promoting an integrated waste management system in Africa; implementing programmes on education for sustainable consumption and production in Africa; promoting sustainable building and construction in Africa; promoting small-scale renewable energy and biomass-based co-generation; and encouraging regional knowledge management and information exchange on sustainable consumption and production in Africa. These priorities appear as part of the report of the regional implementation meeting.

18. In support of these priorities, Africa is looking forward to a bold global 10-year framework of programmes with concrete means of implementation to support regional, national and local actions.

B. Chemicals

1. Actions taken and progress made

19. Many African countries have put sector policies and institutions in place for the sound management of chemicals.

20. National cleaner production centres have been established in some countries to contribute, inter alia, to support the introduction of the sound management of chemicals, including sound practices and techniques, in particular in the private sector.

21. The African stockpiles programme is active in supporting sound management of obsolete stocks of pesticides. The programme is supported by the Global Environment Facility.

22. Africa has made progress in phasing out leaded petrol. This phase out has been facilitated by the Clean Air Initiative for Sub-Saharan Africa and the UNEP Partnership for Clean Fuels and Vehicles.

23. Some countries have received support in introducing cleaner gold mining and extraction technologies to minimize or eliminate mercury releases, and in developing regulatory capacity and mechanisms to enable the sector to minimize the negative environmental and public-health aspects of mercury use in gold mining.

24. Most African countries have acceded to or ratified the following main international conventions on chemicals, namely, the Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal, the Stockholm Convention on Persistent Organic Pollutants, the Vienna Convention for the Protection of the Ozone Layer, the Montreal Protocol on Substances that Deplete the Ozone Layer and the Rotterdam Convention on the Prior Informed Consent Procedure for Certain Hazardous Chemicals and Pesticides in International Trade. Multilateral environment agreements that deal with specific categories of chemicals

and have dedicated financial instruments, such as the Montreal Protocol and the Stockholm Convention, have advanced more rapidly in the implementation phase in many African countries. However, domestication of the conventions and/or development of national implementation plans for these conventions remain slow.

25. The Strategic Approach to International Chemicals Management, which has been endorsed by the African Ministerial Conference on the Environment, is providing the policy framework and integrated approach to foster the sound management of chemicals in the region. A regional plan of action has been adopted and a coordinating mechanism for the strategic approach to international chemicals management (the African Core Group) established with a view of facilitating regional work. Two regional meetings have been held. Many countries have embarked on its implementation, including the funding provided by the quick start programme of the strategic approach to international chemicals management.

26. Regional centres for the Basel Convention are providing capacity-building support and fostering subregional and regional cooperation in chemicals management.

2. Challenges and constraints to implementation

27. There is inadequate awareness of possible risks posed by chemicals among major segments of the African population. This is further complicated by the general lack of reliable data and information on toxicity and safe use and disposal practices for chemicals.

28. There is insufficient cooperation in the development and transfer of appropriate, accessible and affordable technology of safe chemical substitutes and in the development of production capacity. Progress in defining national, subregional, regional and international best available technologies/safe chemical alternatives has been too slow to address the chemicals management challenges in Africa.

29. Most African countries still lack the institutions and facilities to monitor chemicals, in particular hazardous chemicals, or to develop appropriate control strategies to prevent adverse impacts on human health and the environment.

30. There is inadequate financial and human resources and insufficient political support, which hamper the development of chemicals policy, including the implementation of the strategic approach to international chemicals management.

31. The lack of a comprehensive chemicals policy, insufficient enforcement of promulgated legislation to improve sound chemicals management and poorly defined roles of various stakeholders hinder the sound management of chemicals.

32. There is a limited capacity within African countries to allow for effective participation and engagement in negotiations on international chemicals and other environmental agreements, further complicated by the proliferation of meetings under the various multilateral environment agreements, for which preparations and participation by African countries may be inadequate.

3. Lessons learned and the way forward

33. More support is needed to enable countries in Africa to access environmentally sound technologies and safe chemicals. It is recognized that institutions of higher

education and technical and research institutions should play a significant role in adopting and replicating environmentally sound technologies on chemicals.

34. A strong emphasis should be placed on the integration of sound management of chemicals into national policies for economic growth and poverty reduction. Mechanisms need to be strengthened to ensure the promotion of sound chemicals management, including in relation to the production and use of chemicals as an integral part of agricultural modernization and sustainable development.

35. There is an urgent need to further pursue and implement integrated approaches in implementing multilateral environment agreements and other international regimes that provide support to African countries in their efforts to achieve sound management of chemicals.

36. There is an urgent need to invest in facilities and institutions for monitoring and evaluating key chemicals in the African environment as a basis for national, subregional and regional priority-setting for chemicals management. This needs to be accompanied by proper mechanisms for information exchange among African countries, building upon existing initiatives such as the Pesticide Action Network and its database, and the Chemical Information Exchange Network.

37. Greater emphasis should be given to the involvement of the private sector, civil society, farmers and community groups, research and education institutions (including the cleaner production centres and related service providers), in the design and implementation of chemicals management policies and strategies.

38. Implementation of the strategic approach to international chemicals management should be promoted for chemicals policy and management, taking due consideration of existing national policies, institutions and chemicals profiles. More emphasis needs to be placed on strengthening the required formal institutional frameworks and on the enhanced coordination of action at the national and subregional levels, with the involvement of all relevant stakeholders.

39. Regional centres, including laboratories, should be strengthened to enable them to fulfil their mandate, particularly in capacity-building, information generation and dissemination and sharing of best practices.

C. Waste management

1. Actions taken and progress made

40. The application of advanced small-scale digesters to produce biogas, compost fertilizer and/or animal feed from organic waste fractions have been widely accepted in Africa as best practices, and progress is being made in developing and implementing specific projects in various countries.

41. Several African countries have embarked on energy production, including co-generation from agricultural residues such as "bagasse", straw, sawdust, and cotton and coffee husks.

42. The resource-efficient and cleaner production approach has proven to be a feasible best practice for reducing wastes from businesses and other organizations in different parts of Africa and is now being promoted through the network of national cleaner production centres.

43. The production of ethanol from organic wastes, including molasses, is widespread, and further opportunities are available using other organic wastes, such as rice straw, and for carbon dioxide recovery from ethanol production.

44. Some countries have made progress towards formalizing waste management initiatives, including through community-based approaches such as waste recycling projects aimed at poverty reduction and job creation. This is the case both for industrial waste and for municipal waste. In this regard, many African countries have recycling initiatives, especially for paper, plastics, scrap metals and glass.

45. Some countries have started banning the use of specific disposable products, notably the use of plastic products.

46. Many countries in the region have made progress in formulating and adopting waste management policies, legislation and strategies aimed at minimizing the generation of waste and ensuring the sound management of waste. Several countries have introduced integrated waste management strategies that incorporate reuse and recycle principles.

47. Africa still almost exclusively relies on land disposal of wastes. Few sanitary land-fills have been established. Among the few sanitary landfills in operation, some are implementing landfill gas collection and composting.

48. Progress is being made in ensuring sound treatment of hazardous waste by establishing appropriate facilities such as incinerators for hospitals and secure landfills.

49. Most African countries have ratified or acceded to relevant international instruments, including the Basel Convention. In addition, African countries have adopted the Bamako Convention on the Ban of the Import into Africa and the Control of Transboundary Movement and Management of Hazardous Wastes within Africa, although only 27 countries have ratified or acceded to it.

50. The Protocol on Liability and Compensation for Damage Resulting from Transboundary Movements of Hazardous Wastes and Their Disposal was adopted in Basel in 1999, although only nine countries, seven of which are African countries, have ratified or acceded to the Protocol to date.

51. Some countries have implemented programmes for waste management in pursuance of the attainment of the Millennium Development Goal related to sanitation and public health.

2. Challenges and constraints to implementation

52. The single largest implementation challenge remains creation of sufficient capacity for sound management of waste and the implementation of activities for appropriate recovery and recycling of various waste streams across Africa. Progress towards its realization is constrained by access to finance, data and technical capacity.

53. Current by-laws in most countries in Africa put the responsibility for waste management on municipalities, which are insufficiently equipped to deal with collection, transportation and disposal.

54. The importation of second-hand consumer goods and production and/or importation of substandard products contribute to rapid increase in waste generation and its complexity.

55. The implementation and enforcement of waste regulations and conventions are severely constrained by issues related to good governance and transparency in the management of wastes.

56. Inadequate awareness and appreciation of best practices for environmentally sound management of waste is a major constraint, which calls for a paradigm shift towards getting more information and awareness to the general public and the communities concerned.

3. Lessons learned and the way forward

57. The involvement of the private sector in partnerships with local communities in solid waste management activities has provided employment and job opportunities for a substantial number of jobless city residents, many of whom were previously unemployed women and youth.

58. Solid waste management is an important income-generating activity, and such income is not only from wage payments but also from sale of materials recovered from solid waste.

59. Cities with sound refuse collection systems in place have a good source of income for city and municipal councils. It is necessary to exchange knowledge and experience in Africa on successful experiences that can be replicated.

60. The manner in which solid waste was previously managed is gradually changing. For example, there are increasing signs of waste being segregated at source and being collected and stored in waste bins. Sorting is being done at communal waste collection points by organized groups.

D. Mining

1. Actions taken and progress made

61. Most African countries with significant mining activities have reviewed and amended their mining frameworks and codes in the last 20 years in order to reflect a shift from the Government as an owner/operator to Government as regulator/administrator, with the private sector assuming the lead in mining projects.

62. At the subregional level, efforts to harmonize mining codes have increased, including emphasis on the need for transparent and efficient regulatory frameworks.

63. Dialogue and consensus-building on mining frameworks has been facilitated through regional forums such as the round table on "Managing Africa's natural resources for growth and poverty reduction" convened by ECA in 2007. The outcomes of the round table triggered other initiatives, including the Extractive Industries Transparency Initiative, the African Legal Support Facility and the International Study Group to Review Africa's Mining Regimes.

64. Through a technical task force of the International Study Group, the African Union has formulated and adopted the "Africa Mining Vision", which advocates

"transparent, equitable and optimal exploitation of mineral resources to underpin broad-based sustainable growth and socio-economic development".

65. African countries have increasingly signed on to voluntary global initiatives to enhance transparency and accountability in the mining sector. These initiatives include the Extractive Industries Transparency Initiative, the Global Reporting Initiative, the Kimberley Process Certification Scheme and the Extractive Industries Review.

66. Generally, there is an improvement in the participation by local communities in mining projects and in benefits accruing to communities. The improvements in participation by local communities have been facilitated by international schemes based on corporate social responsibility.

67. Significant strides have been made at national level to include environmental and social requirements in African mining regimes. The legislative regimes emerging in most countries now include requirements for environmental assessments and, to a lesser degree, for social impacts.

68. Progress has been made in addressing health and its social impacts relative to mine workers and mining communities. This is largely attributable to improved corporate social responsibility by mining companies, which offer programmes to help those suffering from HIV/AIDS, malaria and tuberculosis.

69. At the regional level, the African Legal Support Facility launched by the African Development Bank should help member States to negotiate improved contracts that support sustainable development of the extractive sector.

70. A few countries in Africa have moved forward using resources and funding for research and development activities, including looking at the development of policies and strategies, technologies to deal with specific matters and value-addition to mineral products.

71. Support for value addition to artisanal and small-scale mining mineral products, mostly gold and gemstones, is slowly improving, involving many countries in the region.

72. Several countries are providing a range of support facilities through artisanal and small-scale mining technology centres. At the regional level, the Yaounde Vision on Artisanal and Small Scale Mining continues to provide guidelines for development in this sub-sector.

73. There has been an increase in technical assistance by development partners to support mining reform in many African countries.

74. There has been an increase in programmes to address the challenges (technical, economic, social, gender and environmental) associated with the artisanal and small-scale mining sector.

75. Although mining frameworks and codes have been put in place, progress to ensure that women are employed in all levels of the mining industry has been slow.

76. Focusing on mine workers, more attention has been placed on safe working conditions and on improving the health of the worker. Mining accidents, which continue to take place, should be prevented through the creation of a safe working environment.

2. Implementation challenges and constraints

77. There is inadequate capacity to monitor compliance with legislative requirements, especially the technical and business reporting requirements, as well as in environmental and social management plans.

78. Existing fiscal instruments do not optimize the collection of resource rents, such as windfall and additional profit taxes, while continuing negotiations with major mining interests poses a challenge to transparency.

79. There is inconsistency in the existence and/or application of instruments and systems to ensure the effective participation of impacted communities and other stakeholders in mining operations, and there is a lack of venture capital sources that would allow African entrepreneurs to enter the mining sector.

80. Implementation of provisions for both social and environmental rehabilitation funds embedded in legislation presents capacity challenges to Governments. Mechanisms to identify and settle mineral-related conflicts and disputes, including addressing social, economic and religious concerns, are lacking.

81. Creating direct and indirect linkages with the rest of the economy remains elusive.

82. Overcoming the large mining infrastructure financing constraints through public-private partnerships and the grouping of infrastructure users to achieve economies of scale via integrated development corridors remains a major challenge.

83. There has been increased levels of environmental destruction occasioned by weak closure and post-closure provisions, leading to an increased number of abandoned or "orphan" mining sites in Africa.

84. Institutional and human capacities for regulating and managing the sector are weak, especially those related to administrative, technical, training and financial functions.

3. Lessons learned and the way forward

85. African countries are urged to invest in new forward-looking, development-oriented mining regimes that create equitable and sustainable mineral wealth from a diversified mining industry that is integrated into the local, national and regional economy.

86. With increased mining along the coast and on the seabed, African countries should look at a regulatory framework to deal with off-shore and coastal mining.

87. Member countries should seriously consider the adoption and application of the minerals conventions emanating from the Kimberley Process Certification Scheme, the Extractive Industries Transparency Initiative, and other systems such as the toolkits, legislation and industry codes for hazardous substances of the International Council on Mining and Metals, for example mercury and cyanide.

88. Governance systems in the mining sector need to be rooted in broader participation by local communities in mining decisions that affect them and corporate social responsibility cannot continue to be exercised in a wholly discretionary manner. Countries should establish and strengthen legislative instruments and systems to ensure the effective participation of affected

communities and other stakeholders. At the pan-African level, through the African Union Commission and ECA, a multi-stakeholder forum should be established to ensure inclusive participation in mineral development debates.

89. The "polluter pays principle" is insufficiently ingrained and enforced in environmental legislation in some African countries. Emphasis should be placed on this principle in environmental laws.

90. Member countries should ensure that environmental-impact assessments are mandatory in all legislation, mining concessions or mineral development agreements, and that they include obligatory social and environmental rehabilitation funds.

91. Infrastructure costs should be shared with other economic activities. Capacity should be developed for resource-based development corridors that optimize the collateral use of mining infrastructure, including transport, power and water, to establish economic activity in other sectors, such as agriculture, forestry and resource processing.

92. The African Union Commission, ECA and other United Nations bodies, as well as the African Development Bank, should speed up implementation of the short-term action plans of the New Partnership for Africa's Development to provide cheap and sustainable energy, which are currently in acute deficit.

93. Investment must be made in appropriate knowledge-creating capacities, including human resources, research infrastructure and innovation systems to support the creation of value and extend linkages to the rest of the economy.

94. In order to address the deficiencies in skills, finance, marketing and technology faced in the area of artisanal and small-scale mining, member countries need to put in place regimes and assistance programmes that facilitate maximization of the contribution of the sector to rural development strategies and poverty alleviation in an environmentally sustainable manner.

95. There should be enhanced support for regional cooperation for geo-mapping and resource development corridors, especially in respect of power projects; strengthened capacity for negotiating large mining infrastructure-financing projects; enhanced capacities to boost environmental and social management practices; and assistance to small-scale mining ventures to promote sustainable and commercially viable mining practices.

96. In order to prevent mining legacies, abandoned and/or orphaned mining sites, mine water problems, accumulation of waste and pollution, there should be more research and development to ensure that enforcement and compliance approaches are put in place.

97. In addition to environmental funds, environmental accounting should be promoted, since operational costs in this field is a critical part of the life cycle of mines.

98. Emphasis should be placed on research and development in the field of mine closure and dealing with mining legacies; programmes and initiatives should be undertaken by Government, industry and other stakeholders.

99. The increasing number of industrial accidents resulting in serious negative environmental health, social and economic impacts in mining communities

highlights the need to enhance the capacity of the mining sector to develop and implement industrial accident prevention and preparedness strategies and plans.

100. Development support needs to be directed at building sustainable institutional and human capacities in key areas, including financial, technical and management functions.

E. Transport

1. Actions taken and progress made

101. Some transport infrastructure development, including the building of roads, railways, airports and seaports, has taken place. The region is still lagging behind, however, in developing sustainable transport.

102. The integration of transport sector strategies into poverty reduction goals through the Poverty Reduction and Transport Strategy Review process is under way in over 30 African countries under the Sub-Saharan Africa Transport Policy Programme.

103. To ensure the integrated development of Africa's infrastructure and to avoid duplication of efforts, the African Union Commission, the African Development Bank and the secretariat of the New Partnership for Africa's Development have embarked on a joint initiative known as the "Programme for Infrastructure Development in Africa".

104. There have been a number of regional and subregional meetings resulting in declarations and resolutions and plans of action aimed at developing and improving the operations of transport in Africa.

105. Progress has been made in enhancing safety in air transport through the Universal Safety Oversight Audit Programme.

106. Subregional conventions and protocols have been adopted, many of which are being implemented. With respect to transport facilitation in Africa, a multitude of international and bilateral agreements and protocols aimed at simplifying and harmonizing trade and transport between States have been signed.

107. Most African countries had phased out leaded gasoline by the end of 2008. Countries are also reducing sulphur levels in diesel fuels by introducing cleaner vehicle regulations, particularly age limitation and fuel efficient vehicles.

108. Measures have been undertaken to establish and restructure road agencies and road funds, as well as to enhance the capacity of local governments to effectively coordinate rural transport infrastructure and services.

109. An energy-efficient mass public transport system known as bus rapid transit (BRT) was recently introduced in Africa. BRT simulates a mass transit using exclusive right of way lanes.

110. Some African countries, under the programme Access Africa, are implementing bicycle transport initiatives as a way of exploring the potential of low cost and low carbon mobility, as a way to promote environmentally friendly cities.

111. Following a high-level meeting held in Djibouti on 26 January 2009, in order to combat the increasing threat of maritime piracy in the Horn of Africa and the

Gulf of Aden, many Governments, in cooperation with the International Maritime Organization (IMO), are taking steps, including developing a code of conduct, to combat acts of piracy and armed robbery against ships.

112. Africa has succeeded, in a limited way, in mobilizing resources from the public sector, the private sector and external development partners to finance transport infrastructure and operations.

2. Challenges and constraints to implementation

113. Inadequate transport networks in Africa limit connectivity, accessibility and trade within the continent.

114. Inadequate policies and strategies, as well as the slow implementation of subregional and regional agreements, remain major obstacles to the development of sustainable transport in Africa.

115. Many African countries do not have policies that facilitate private sector participation in transport infrastructure development and operation.

116. Liberalization and privatization in rail, air and maritime transport is still in its infancy. Efforts to harmonize policies and regulations pertaining to cross-border movement of goods, services and people have not been wholly effective.

117. The number of workers in African public transport enterprises and agencies is relatively high, but the availability of skilled personnel is still limited in most transport industries. Moreover, in many countries there is lack of institutions equipped with appropriate powers and technical capacity to formulate, plan and manage infrastructure development and services as well as to monitor and enforce policies and regulations.

118. Despite the critical importance of the transport system in economic development and poverty reduction, the prevention and mitigation of its environmental impact remains a challenge.

119. Transport costs in Africa are among the highest in the world. Transport services are unaffordable for many African citizens as transport costs are high compared to the average incomes of the citizens. Limited skills of managerial and operational staff as well as poor transport infrastructure and facilitation play significant roles in the high transport costs in the region.

120. The prevailing poor state of road safety remains a serious challenge in Africa, as accidents, and the resulting loss of life and destruction of property, have assumed intolerable proportions. A major weakness in this area is the paucity of lead institutions that are responsible for road safety. Coupled with this, there appears to be a lack of consistent enforcement of traffic regulations.

121. Transport data and information in Africa is limited and poorly organized. At the same time, there is inadequate utilization of information and communications technologies throughout the continent.

122. Significant gaps remain between the demand and available financial resources for sustainable transport development.

3. Lessons learned and the way forward

123. National policies should be reviewed and harmonized in a coherent manner, with global and regional policies and agreements to facilitate the reflection of regional and global level decisions in national policies, budgets and development plans. Furthermore, countries should ensure that appropriate institutional frameworks that clearly delineate regulatory and operational functions of all modes of transport are put in place.

124. Social and environment impact mitigation measures should be incorporated and enforced in the development of infrastructure. In addition, there is a need for countries to take further measures to minimize emissions and promote development of environment-friendly transport systems in Africa.

125. Countries need to develop policies that promote energy efficiency. Such policies should aim, inter alia, to promote the importation of energy-efficient vehicles; the use of clean fuels; limitation of the age of imported second-hand vehicles; and improvement of traffic management.

126. Transport costs can be optimized through the full implementation of transport facilitation initiatives, the promotion of intra-modal, inter-modal transport competition, and multi-modal transport systems to improve efficiency.

127. In order to promote safety in the transport sector, countries need to prioritize road safety programmes and allocate adequate funds for such programmes. Countries should also ensure compliance with safety regulations and standards established by the relevant regional and international bodies, in particular the International Civil Aviation Organization (ICAO) in the area of air transport. Furthermore, countries need support in order to strengthen their capacity to address maritime security problems, particularly in relation to the escalation of maritime piracy in recent years, in a holistic manner, including through an in-depth look at the root causes of piracy.

128. Information and communications technology (ICT) offers a powerful tool in accessing, processing and disseminating large volumes of information in the shortest time possible, and it should be utilized in the transport sector.

129. In order to secure sufficient financing for the development and maintenance of transport infrastructure, countries should enhance public source financing by ensuring that an adequate share of GDP is allocated to the sector from public funds and by raising external resources to take advantage of resources from multilateral and bilateral donors, and other innovative funding mechanisms.

130. Since Africa's financial resources are limited in comparison to its huge infrastructure financing needs, its development partners are called upon to continue providing sufficient development assistance and to honour their commitments despite the current global economic crisis.

F. Interlinkages and cross-cutting issues

131. The different thematic areas under review are all interlinked and when dealt with in an integrated way can help address the various crises, for example, by reducing the carbon intensity of growth and by increasing agricultural productivity in a sustainable way, while implementing the decisions of the Commission on

Sustainable Development. Sustainable consumption and production initiatives aim at adopting the life cycle approach in order to promote optimal use of resources, waste minimization and recycling, with a view to ensuring sustainable patterns of consumption and production. The chemicals, mining and transport sectors entail resource-intensive processes and have high polluting potential. The adoption of sustainable consumption and production in these sectors will go a long way in ensuring efficiency in resource use and minimizing pollution. In terms of cross-cutting issues, the promotion of sustainable consumption and production in the different thematic areas calls for the adoption of holistic, integrated and participatory approaches across the board. This includes the development and implementation of appropriate policies, strategies and programmes. Since impacts are transboundary, regional cooperation should be fostered, including through strengthening mechanisms for policy and programme coordination and knowledge management.

1. Actions taken and progress made

132. Agricultural waste such as bagasse, straw, sawdust and cotton and coffee husks is being used by African countries for energy production, including co-generation. Some countries are taking advantage of the co-funding opportunities provided by the clean development mechanism of the Kyoto Protocol of the United Nations Framework Convention on Climate Change.

133. Several countries in the region have initiated the development of cleaner energy sources and measures for the improvement of energy efficiency.

134. Mechanisms and frameworks such as the African 10-year framework of programmes on sustainable consumption and production, the strategic approach for integrated chemicals management, integrated waste management, transport and mining that seek to promote integrated and resource use efficiency have been adopted and are being promoted. Among other notable initiatives is the "Programme for Infrastructure Development in Africa" of the African Union Commission and the African Development Bank, which is aimed at ensuring the integrated development of Africa's infrastructure and the avoidance of the duplication of efforts.

135. Many countries in the region have made progress in establishing initiatives and programmes and in formulating and adopting policies, strategies and legislation to foster sustainable development. These include laws and policies in the broad area of environmental management as well as in sectoral areas such as mining, energy, agriculture and health. Many African countries have also ratified major chemicals and waste-related conventions as well as other multilateral environment agreements. In the mining sector, African countries have increasingly signed on to voluntary global initiatives.

136. Some progress is being made towards policy and programme integration, mainly within the framework of poverty reduction strategies, national sustainable development strategies and sector-wide approaches. The Strategic Approach to International Chemicals Management and national sustainable consumption and production programmes are the other tools being used for integrated programme development and implementation.

137. A wide range of recently formulated policies and legislation, which provide for transparent governance and multi-stakeholder participation, including consideration

of gender concerns in policy and programme formulation and implementation, have led to a general improvement in community participation in programme development and implementation.

138. The region has made some progress in putting in place structures and frameworks that are vital to the enhancement of regional cooperation in a wide range of areas pertinent to the issues under consideration, including the New Partnership for Africa's Development programme of the African Union, as well as other regional frameworks. African ministerial conferences, councils and other mechanisms have also been put in place for policy and programme coordination and advocacy in the region.

2. Challenges and constraints to implementation

139. Inadequate institutional, human and/or financial resources capacities continue to be a major contributing factor to the slow rate of implementation of national policies and legislation, including the international regimes on issues under review. The implementation gap, which is widening, is crippling the achievement of the desired sustainable development objectives.

140. Compartmentalized approaches still prevail in the implementation of global, regional and national initiatives. These approaches result in poor coordination, duplication and strain on limited resources.

141. The region is confronted with systemic challenges such as inadequate capacity for monitoring, and research and development. There is poor dissemination of the limited data and information collected. Opportunities to facilitate knowledge, including the use of indigenous knowledge systems and the sharing of best practices, are limited.

142. Lack of national cleaner production centres in many African countries is hampering the promotion of resource efficient and cleaner production in various sectors as well as the sound management of chemicals and waste.

3. Lessons learned and the way forward

143. The understanding and appreciation of the various policies and strategies by political leaders is crucial in generating the political will and commitment essential to ensuring effective implementation of the strategies. There is a need for effective communication strategies to enable the political leaderships to understand and appreciate strategies and programmes such as the 10-year framework of programmes on sustainable consumption and production.

144. Mobilizing resources from both national and official development assistance (ODA) sources needs to be strengthened in order to ensure substantially scaled up and sustained resources provision for the implementation of programmes at regional, subregional and national levels. Incentives should be developed and implemented to encourage and attract investments by the private sector in the development of clean and efficient energy, sustainable transport systems, sound management of chemicals and waste technologies, the development of national content for the mining sector and infrastructure.

145. Integrated initiatives and approaches, such as regional and national sustainable consumption and production programmes, the strategic approach to international

chemicals management, environmental and social management plans, as well as integrated transport master plans, provide a unique opportunity for tackling cross-cutting issues and challenges in a holistic and optimal manner. Emphasis should be placed on developing such integrated programmes and ensuring that priority national development strategies incorporate such initiatives. In this regard, capacity for integrated analysis, policy development, planning and implementation needs to be strengthened at national and subnational levels. In addition, harmonization of policies and programmes across countries in the region needs to be scaled up.

146. The information and knowledge base for planning, implementation, monitoring and evaluation needs to be strengthened. The capacity for research, documentation and dissemination of reliable data, information and best practices at the national and regional level should be enhanced.

147. Cooperation in the development, transfer, adaptation and diffusion of appropriate and affordable technologies, in particular energy-efficient technologies, safe chemical alternatives and cleaner technologies, needs to be strengthened. There should also be enhanced information exchange on such technologies.

148. In order to achieve the set goals, global, regional and subregional initiatives should be linked and coordinated with national development processes. Countries need support in translating international initiatives into implementable national and local action plans. Such national plans should also be developed and implemented in the context of achieving basic needs. A good example is linking sustainable consumption and production to the challenge of poverty reduction.

149. There is a need to design, promote and strengthen appropriate economic, financial and market-based instruments for sound chemicals management, sustainable transport development, waste minimization, mining and sustainable consumption and production.

150. Existing national cleaner production centres should be scaled up and expanded to countries where they do not exist as a platform for the development and implementation of appropriate programmes in resource-efficient and cleaner production, including the sound management of chemicals and waste.

151. Capacity-building programmes need to be developed and implemented in order to upgrade the knowledge base, including the use of indigenous knowledge systems and the skills of staff involved in policy formulation, planning and implementation, as well as of those engaged in regulatory and enforcement functions.

152. Appropriate institutional frameworks must be established, and national, regional institutes and centres of learning and specialized training and applied research and technology development strengthened and expanded.

IV. Conclusion

153. Significant progress has been made in putting policies and other frameworks in place at regional, subregional and national levels in order to achieve targets associated with the themes under review. However, these policies and frameworks have to be translated into substantial concrete action — and the widening implementation gap needs to be reduced. Priority needs to be given to implementation of the various strategies, plans and declarations, with a strong

emphasis on tangible results on poverty reduction, food and energy security, health and sustainable environment and natural resources management. There is also a need to support the ongoing efforts in the area of monitoring and evaluation of policies and actions and to facilitate exchanges of experience and dissemination of best practices.

154. Closing the implementation gap should be enabled by adequate financing, capacity development and by facilitating Africa's access to technological and managerial know-how and environmentally sound technologies. There is need to fulfil ODA commitments, including the commitments made by developed countries to achieve the target of 0.7 per cent of GNP for ODA to developing countries by 2015.

155. The private sector plays an important role in mobilizing and providing means of implementation, including developing and disseminating sustainable consumption and production technologies and practices. There is need to support national efforts to create effective enabling conditions for private sector involvement and investment, including the development of local entrepreneurship.

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Thematic cluster for the implementation cycle 2010-2011 — review session

Chair's summary of the regional implementation meeting for Asia and the Pacific

I. The development context of Asia and the Pacific

1. The region of Asia and the Pacific was at a crossroads. Policy and investment decisions made today, whether in response to cross-sectoral issues, to thematic clusters such as transport, chemicals, waste management and mining, or to the 10-Year Framework of Programmes on Sustainable Consumption and Production, would lock countries into development patterns for decades to come. The key was to: (a) facilitate economic development, which would decouple the use of resources, whether minerals or chemicals, from the growth of gross domestic product (GDP); (b) promote sustainable consumption and production patterns and sustainable transport; and (c) provide access to employment and basic needs, while minimizing congestion, waste, pollution and energy use.

2. With regard to development and sustainability in Asia and the Pacific, whether in terms of cross-sectoral issues or in a thematic context, there was a need to build a resilient, integrated socio-economic and ecological system that could respond to the shocks that had recently affected the regional and global economy as a result of the financial, fuel and food crises. The development of such a system would require a focus on three actions: (a) staying within limits; (b) building the resilience of the integrated system; and (c) responding to system linkages.

3. The notion of limits, or thresholds, was an important concept in sustainability. Resource use, or eco-efficiency, which was the basic ingredient of both green growth and sustainable consumption and production (the cross-cutting theme relevant to the thematic cluster under discussion), was therefore essential in order to maintain pressures within limits and promote system resilience and, consequently, sustainability. Participants observed that the concern to foster ecological harmony

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and sustainability was deeply rooted in the region, as exemplified by the "gross national happiness index" in Bhutan, the "sufficiency economy" in Thailand, the strategy for "low-carbon green growth" in the Republic of Korea and the "harmonious society" in China.

4. Green growth was focused on the decoupling of socio-economic development and related human activities from their environmental impacts. The implicit goal was to minimize the negative impacts of one component system on the others. The Economic and Social Commission for Asia and the Pacific (ESCAP) had therefore identified the eco-efficiency of growth as a key element in meeting future needs while remaining within the limits of environmental carrying capacity.

5. Thus, the policies and actions required for the development of resilient socio-economic systems should help to resolve problems related to both cross-sectoral and thematic issues and should receive greater attention in national, regional and international dialogues. There was a need to recognize the linkages among the social, economic and ecological systems. Currently, investment in the hardware needed for sustainable development was being well promoted by policymakers, while investment in the software — meaning the changes required in terms of the behaviour, governance, engagement and empowerment of multiple stakeholders — had not been sufficiently addressed. Stronger input regarding cross-cutting and thematic issues was needed.

6. Finally, in the midst of multiple crises, when traditional development models were being questioned and the world was seeking new paths and new leaders, the region of Asia and the Pacific had the opportunity to shape not only its future, but that of the entire world. The need for enhanced financial provisions, environmentally sound technology transfer and regional cooperation aimed at the sharing of good practices was also expressed. In addition, the region could develop a common set of standards, norms and development approaches — one that encompassed eco-efficiency principles, policies and strategies and incorporated all aspects of sustainable development (economic, social and environmental) in an inclusive and balanced way.

II. General comments on the thematic reports

7. Participants expressed their appreciation for the drafting of the comprehensive thematic and synthesis reports and praised them as useful in facilitating the regional discussion in the process of the Commission on Sustainable Development. However, it was pointed out that, owing to the broad scope of each of the five thematic areas, as well as to their complex interlinkages, the current regional implementation meeting process might be insufficient to comprehensively address all aspects relevant to areas of priority for collective regional action.

8. In order to ensure a broad and detailed information base for the review process of the Commission, meeting participants encouraged all Governments to submit national reports to the Commission secretariat.

III. Review of issues related to thematic areas

A. Transport

1. Progress and achievements

9. Considerable progress had been made in the areas of regional integration and connectivity. The benefits of improved transport, however, had affected mainly populations in coastal areas of Asia, particularly near seaports. Thus, there remained a substantial transport task in terms of reaching large populations in remote and rural areas, as well as in landlocked countries, to promote inclusive prosperity.

10. The number and the quality of roads had increased in recent years, but much more needed to be done to extend adequate transport services into rural areas, including the development of feeder roads. Efficient access to markets, especially in terms of transporting agricultural goods, was imperative to permit trade in locally produced goods and thereby make rural economies viable. Transport played a crucial role in poverty alleviation, by facilitating access to employment for low-income groups and by increasing the amount of time that they could devote to income-producing activities. In rural areas, distance from schools and the quality of roads were major determinants in education completion rates, whereas distance from a hospital was a significant factor in infant and child mortality, as well as maternal mortality.

11. The provision of transport services of sufficient quality was closely linked to economic performance and social equity. A socially sustainable transport system would meet the mobility and access needs of society's most vulnerable groups, including low-income families, women, the elderly and persons with physical disabilities. In particular, sustainable transport and gender should go hand in hand. Increased mobility was crucial to enable women to participate in economic development. Many countries were placing priority on public transportation, and good examples of universal access could be seen throughout the region. Some countries, such as the Philippines, were in the process of developing national strategies for environmentally sustainable transport. At the same time, much more needed to be done in the region if socially inclusive transport systems were to be developed.

12. Air quality levels had improved in a number of Asian cities in recent years, thanks primarily to the successful phasing out of lead gasoline and two-stroke motorcycle engines, as well as to improved vehicle emission and fuel quality standards. Despite that progress, air pollution levels in Asian cities still exceeded guidelines established by the World Health Organization, resulting in an estimated half a million premature deaths every year. Particulate matter was the main pollutant of concern, with ozone becoming increasingly problematic.

13. Transport was among the principal sectors in terms of total energy consumption in Asia and the Pacific, and was the largest consumer of petroleum. That had significant implications for the region's energy security, as the majority of countries were net energy importers and were particularly affected by volatile oil prices. Some countries had achieved progress in improving fuel efficiency and vehicle emission standards. Japan, for example, had been able to achieve a 50 per cent improvement in fuel efficiency during the previous 20 years, thanks to its "Top Runner standards" approach.

14. The transport sector was also the second-largest contributor to global carbon dioxide emissions, accounting for 23 per cent of the total, and was the fastest-growing source of such emissions in developing countries. Countries were taking steps to reduce emissions by, for example, promoting public transportation, moving towards less-carbon-intensive modes such as rail, and improving fuel efficiency. Such measures had already made it possible to reduce the emissions of the transport sector in Japan, for example, from the peak reached in 2001. In countries in which the carbon-intensiveness of the transport sector was already relatively low, the priority was to maintain that level while expanding access.

2. Challenges and constraints

15. The lack of access and mobility in rural areas had stifled the achievement of true sustainable development. An incomplete freight infrastructure limited the market reach of local products. Rapid motorization in the region had contributed to a number of problems, including congestion, air pollution, greenhouse gas emissions and transport-related injuries and fatalities. Low-income residents often bore the brunt of the negative impacts of motorization, despite the fact that many of the poor did not themselves own motorized transport.

16. Among the most significant obstacles to sustainable transport were the following: (a) inadequate institutional and governance structures; (b) a lack of sufficient information on the part of national and local policymakers; (c) insufficient baseline data with regard to existing modal share, user needs, air quality and other critical factors; (d) insufficient human resources to address the relevant issues; (e) inadequate funding resources; (f) a lack of access to suitable technologies; (g) focus on only a few major cities, not taking into account actions aimed at sustainable transport in secondary and smaller cities and rural areas; and (h) a lack of vehicle emission standards. Also noted was the importance of broad-based public participation in transport infrastructure development processes.

17. Adaptation to climate change was expected to be a major challenge for the region in the coming years, as transportation infrastructure stood to be severely affected by its impacts, including sea level rise and more extreme weather events. Asia and the Pacific was already the region most affected by natural disasters, and a lack of adequate transportation greatly hampered relief efforts.

3. Policy options/way forward

18. Addressing the complexity of the sustainability challenges posed to the transport sector required the development of integrated transport strategies. Such an approach should include, inter alia, land-use planning, the planning of non-motorized and public transport options in both urban and rural areas, infrastructure for intermodal freight systems, business models aimed at financially viable operations and maintenance, communications and outreach messages designed to influence behavioural patterns, and clean technologies with a view to achieving energy efficiency and low emissions.

19. Participants noted with concern that access to basic rural transportation and related services was still lacking in many areas, in particular in the least developed countries of the region, which was hampering the effectiveness of poverty eradication efforts. Greater international technical and financial support was urgently needed.

20. International efforts to address global climate change should provide opportunities to create transport systems that also delivered economic, social and environmental benefits. Focusing on shared benefits could help to achieve win-win solutions in the development of climate change mitigation strategies. Given the need to expand access to efficient and affordable transportation in the region, especially in rural areas, policies to that end should focus not on reducing transport, but on reversing the growth in the greenhouse gas emissions of the sector, including through appropriate technologies. Public transportation should be promoted in order to move towards less-carbon-intensive modes such as rail. Promoting fuel efficiency and introducing fuel economy measures, such as an appropriate tax on fossil fuels, could also contribute to low-carbon development.

21. Private-sector collaboration within the framework of public-private partnerships had already proved effective in many transport projects and should be considered as a means of advancing the transport and development agenda. Many low-cost technological solutions were already available but had not been implemented. Partnerships with scientific and technological communities could facilitate the dissemination of that knowledge. Moreover, partnerships with civil society organizations were instrumental in addressing the needs of the most vulnerable groups.

22. Regional and international cooperation should be strengthened in order to advance the transport and development agenda. Regional integration efforts, such as the intergovernmental agreements on the Asian Highway Network[1] and the Trans-Asian Railway Network[2] were vital to the development of sustainable intermodal transport systems that would deliver efficient domestic transport services and, at the same time, provide access to international markets and to a greater number of remote areas. International financing provided by development banks and bilateral agencies was essential in catalysing initial demonstrations and in closing financing gaps. Initiatives such as the Ministerial Conference on Global Environment and Energy in Transport played an important role in advancing the low-carbon sustainable transport agenda. The Asian Environmentally Sustainable Transport initiative was also playing an instrumental role in the promotion and mainstreaming of integrated strategies and approaches aimed at the development of sustainable transport in Asia.

B. Chemicals

1. Progress and achievements

23. Asia and the Pacific, the second largest region in the world in terms of production and consumption, after Europe, had made progress in the safer management of chemicals.

24. Overall, most countries in Asia and the Pacific were making progress in improving knowledge, norms and procedures related to the safer management of chemicals on the basis of a number of international agreements, instruments and programmes in that area. Those agreements covered such areas as the strengthening

[1] United Nations, *Treaty Series*, vol. 2323, No. 41607.

[2] Economic and Social Commission for Asia and the Pacific resolution 62/4.

of knowledge and information measures through education, training and awareness-raising activities, instruments and programmes and risk reduction programmes.

25. Many countries had also improved chemical safety policies in the development of systems for emergency preparedness and response with regard to chemical accidents, the control of chemical use in protected areas and the strengthening of liability and compensation schemes addressing damage to human health and the environment.

26. Most countries had benefited from new knowledge and information acquired as a result of multilateral environmental agreements relating to chemical management and capacity-building programmes. Those programmes were being implemented bilaterally and multilaterally. The progress made in countries in Asia and the Pacific in implementing, inter alia, the Rotterdam Convention on the Prior Informed Consent Procedure for Certain Hazardous Chemicals and Pesticides in International Trade,[3] the Stockholm Convention on Persistent Organic Pollutants[4] and the Strategic Approach to International Chemicals Management was highlighted.

27. Initiatives to prevent the illegal trafficking in chemicals and hazardous wastes included the ratification of relevant multilateral environmental agreements, such the Montreal Protocol on Substances that Deplete the Ozone Layer,[5] the Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal,[6] and the Stockholm Convention, as well as global initiatives such as the Strategic Approach to International Chemicals Management.

2. Challenges and constraints

28. The implementation of existing international policy frameworks relating to chemicals should be further strengthened, including through the provision of the financial resources and capacity-building required by developing countries. The implementation of established international policies was uneven in the region, and the development process might be delayed in some cases as a result. In Pacific island countries and territories, implementation had been slow in comparison with that in other subregions. Those countries and territories also faced difficulties in implementation owing to a lack of the required infrastructure.

29. Despite the considerable efforts made over the previous decade, many countries lacked the capacity to ensure environmentally sound chemical management. Often, national management capacity could not keep pace with the rapid growth in the level of consumption and the number of new chemicals.

30. Furthermore, it was imperative to engage the private sector and to promote corporate social responsibility in the area of chemical management. The chemical industry continued to evolve, new chemicals were being developed, and access to information regarding the risks associated with those chemicals was often unavailable or limited.

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[3] United Nations, *Treaty Series*, vol. 2244, No. 39973.

[4] Ibid., vol. 2256, No. 40214.

[5] Ibid., vol. 1522, No. 26369.

[6] Ibid., vol. 1673, No. 28911.

3. Policy options/way forward

31. In order to achieve sound chemical management, Governments needed to commit themselves to the following actions: (a) integrate chemical management into national development priorities; (b) develop strong national institutional and programmatic frameworks; (c) promote the ratification and implementation of the relevant international conventions; (d) encourage the implementation of internationally recognized standards, tools and approaches relating to the environment, health and protection from chemicals, revise legislation and enforce existing regulations; and (e) promote the participation of the private sector and non-profit civil society in chemical management.

32. As most problems encountered in developing countries stemmed from the inappropriate distribution of knowledge and low capacity in terms of human resources, technical assistance should be strengthened with a view to educating local personnel about the impacts of chemicals and assessment methodologies.

33. National Governments and multilateral agencies should engage in robust cooperation to support the preparation of the required infrastructures, including laws and regulations, research facilities and databases. Such interventions should assist in improving the reliability of information and in informed decision-making. Increased international efforts should be made as a matter of urgency to assist countries in developing and enforcing legislation aimed at controlling the illegal movement of toxic chemicals.

34. As developing countries in the region lacked the capacity to respond effectively to serious accidents or to monitor long-term environmental effects, preventive policies should be strengthened. Appropriate technologies should be developed to guide resource allocation and investment.

C. Waste management

1. Progress and achievements

35. Several global initiatives had been undertaken to address waste. Local Agenda 21, the Millennium Development Goals, the Basel Convention, the Stockholm Convention, the Montreal Protocol, the Strategic Approach to International Chemicals Management and the Kyoto Protocol,[7] inter alia, covered various aspects of municipal, industrial and hazardous waste and wastewater. In addition, several international and bilateral agencies were actively engaged in promoting sustainable waste management.

36. In order to promote the exchange of information and to strengthen the capacities of developing countries, including the least developed countries, to acquire and disseminate waste treatment technologies, a "3R" (reduction, reuse and recycling) knowledge hub had been created with the assistance of the Government of Japan.

37. While most municipal solid waste was dealt with by local governments, industrial and hazardous waste, health-related waste and emerging waste were usually addressed by government at higher levels. Local and national governments

[7] See FCCC/CP/1997/7/Add.1, decision 1/CP.3, annex.

were facing several challenges in managing waste, including a lack of financial resources, limited availability of suitable technology and land for waste disposal, and increasing transportation costs. Many Governments had begun to take steps towards ecologically sound solid-waste management. Some had adopted comprehensive legislation concerning the environmentally sound management of hazardous waste, solid waste and wastewater. Many countries had incorporated the "3R" approach into their waste management practices. The implementation strategies of many countries focused on involving the private sector and communities in solid-waste management, particularly in the "3Rs". Meeting participants were informed about country initiatives aimed at the conversion of waste into energy and the composting of organic waste for use as fertilizer in agriculture.

2. Challenges and constraints

38. Despite the progress made, several challenges and constraints remained, as waste generation was rising rapidly in the region of Asia and the Pacific, in particular as a result of economic growth, urbanization and industrialization. The amount of municipal solid waste, hazardous waste and medical waste was expected to continue to grow, exemplifying the persistent nature of many of the challenges faced by the region.

39. Although many countries had promulgated laws and regulations in this area, their implementation and enforcement remained a challenge. Moreover, the development of relevant capacities on the part of national and local governments had not been undertaken. Another key challenge was gaining access to the technologies and the financing needed to address waste management.

40. A key challenge with regard to hazardous waste lay in the differences among countries regarding definitions. That made it difficult to enforce laws and was among the reasons for the continuing import and export of hazardous waste. Moreover, the transport, treatment and disposal of nuclear waste remained a challenge in the region.

3. Policy options/way forward

41. Meeting participants highlighted the following as the key areas for continued and future action: (a) greater regional cooperation in the exchange of information with a view to the formulation of national waste management strategies; (b) innovative approaches and technologies with regard to municipal solid waste; and (c) biomedical waste management. The development of guidelines in the context of the Conference of the Parties to the Basel Convention and the exchange of regulatory information concerning hazardous waste through the activities of the Asian Network for Prevention of Illegal Transboundary Movement of Hazardous Wastes were also cited as key vehicles for future regional cooperation.

D. Mining

1. Progress and achievements

42. The region of Asia and the Pacific was richly endowed with mineral resources and was a major contributor to the global production of such resources. The demand

for minerals had increased as regional economies had grown, while the kinds of minerals in demand were changing. Nuclear energy production, requiring uranium, had been accelerating in recent times, while the development of clean technologies had led to an increased demand for rare metals, including rare earth elements. Large-scale mining continued to pose challenges for local communities, including compromised human and animal health and well-being and the destruction of natural resources and ecosystems. Mineral resources were found mainly in areas that were home to indigenous peoples, the benefits were not shared, and the environmental impacts were borne largely by those groups. In addition, women, young people and children were particularly vulnerable.

43. Regional frameworks supporting the development of new mining policies had been established by the Association of Southeast Asian Nations (ASEAN) and Asia-Pacific Economic Cooperation (APEC). Both ASEAN and APEC had made important political declarations on mining.

44. Governments had taken steps to promote responsible mining, including the establishment of specific policy frameworks to promote the sustainability of the mining sector. The following initiatives were noted during the regional implementation meeting: (a) policies, regulations and procedures for rehabilitation planning; (b) conflict resolution management; (c) consultative processes; (d) environmental impact assessment; (e) damage assessment as a basis for the improvement of compliance and monitoring; (f) small-scale mining; and (g) the analysis of stakeholder interest. Furthermore, mining had been prohibited in catchment areas and forest reserves, and higher prices had been established for water use by the mining sector. National experiences also highlighted the good potential of combining responsible private-sector investment, strong Government regulation and social policies to ensure benefits for local communities. The representative of one small island State highlighted the fact that, in that country, applications for mining concessions had been denied and priority had been placed on sustainability considerations over short-term economic gain.

45. The extractive industry had taken steps to establish management systems and policy frameworks in order to comply with global standards and to improve reporting. There had also been cooperative action to promote social responsibility and scientific, sustainable mining. However, there was still a gap between expectations regarding sustainability "standards" and mining operations on the ground.

46. Moreover, United Nations entities and civil society organizations were important players in the region. International agencies such as the International Labour Organization and the United Nations Environment Programme (UNEP) had established important initiatives to support sustainable mining.

47. Success stories in the area of technology innovation included techniques for in situ leaching, energy efficiency, reductions in water requirements, and enhancements in robotics and other technologies to reduce energy demand and the risks posed to humans.

48. Despite the progress made in several areas, the development opportunities presented by the mining sector had not been fully realized, mineral resources were undervalued, benefits were not equitably distributed and the linkages with the wider economy were weak. Countries that were heavily dependent on the export of

commodities were vulnerable to changes in global commodity prices and to natural disasters.

49. It was recognized that mining was not sustainable over the long term. A good example of industrial ecology approaches that supported demand management was the Eco Town Programme, aimed at maximizing the economic and environmental opportunities presented by the geographical proximity of industrial and urban areas, through the use of commercial, municipal and industrial waste in industrial applications.

2. Challenges and constraints

50. Among the challenges facing the mining sector were the following: ensuring the efficient use of resources; the high intensity of energy use; the management of toxic substances; ensuring appropriate labour conditions; the development of mutually beneficial relationships with local communities; and the management of financial and technological risks. There were persistent challenges related to artisanal gold mining and the associated mercury contamination, as well as to the radioactive waste management issues arising from uranium mining.

51. The mining industry was increasingly required to conduct more environmentally and socially responsible and acceptable operations. Raising public awareness, the anti-mining sentiments expressed by some groups, institutional investors' awareness of the links among economic performance, risk and environmental responsibility, and the recognition of the rights of indigenous groups as a critical and high-profile issue provided incentives for increased corporate social responsibility. In addition, mining was an energy-intensive activity, and the role of the sector in mitigating climate change should be better articulated. Integrated water and ecosystem management required increased attention to areas potentially affected by mining; mining was water-intensive, and operations were often located in ecologically sensitive areas such as mountains.

52. Recent trade developments relating to the trade in mercury and mercury compounds reflected increasing environmental awareness, a trend that would have an impact on the regional mining industry. Trade and environmental policies should be mutually supportive, and trade-distorting policies should be avoided.

53. While mining was an important economic sector, sustainability considerations required that serious consideration be given to measures aimed at reducing the demand for minerals through demand-side management, including "3R" approaches.

54. While regulatory frameworks and incentives were improving in several countries, the lack of implementation capacities was reducing their effectiveness. The implementation gaps relating to the enforcement of regulations were noted. Implementation shortfalls reflected human capacity shortfalls as well as financing and technological constraints, as noted by the representatives of several countries.

3. Policy options/way forward

55. An inclusive mining policy was needed to support holistic approaches aimed at meeting the demand for minerals. Greater policy integration with other sectors was required, as were assessments of the strategic sustainability of mining operations.

56. Enhanced regional cooperation, including an international convention in the areas of mineral trade and investment policy, to support environmental rehabilitation could be considered. It was suggested that member countries should spend a percentage of their income derived from mining on environmental rehabilitation as a way to support the sustainable development of the mineral sector. The experiences of countries in the region with such an investment policy should be shared.

57. Investment made on the basis of inclusive and transparent processes should be promoted. That would require greater consultation regarding issues related to indigenous peoples; the rights of indigenous peoples were particularly at risk in mining operations, and human rights approaches could assist in the establishment of good practices. Inclusive and transparent processes should be supported by policies aimed at free, prior and informed consent and the inclusion of women's perspectives in policymaking and planning. Better communication was needed with respect to risk and as a basis for risk management. Specific conclusions should be drawn regarding what constituted acceptable mining activity.

58. Increased capacity in developing countries to conduct environmental impact assessments was essential.

59. Corporate social responsibility and ethical approaches, such as ensuring fair trade in minerals, should be promoted.

60. Investments in science and technology were needed in areas that included the following: (a) clean technology to support the mitigation of environmental impacts, the use of resources, and the management of mining waste; (b) the rehabilitation of abandoned mines; and (c) advanced mining technology, including in new fields such as geomimetics. In that regard, the role of scientific institutions as Government partners should be strengthened.

61. Demand management should be strengthened through life-cycle assessments and industrial ecology approaches. Recycling was also critical if demand was to be kept within sustainable limits. Good land-use planning should be considered in order to optimize benefits and help to prevent conflict. The prohibition of mining in catchment areas and forest reserves was one example.

62. While nuclear power was being promoted as a viable source of energy by a number of Governments in the region, dialogue should be strengthened as a framework for discussing important issues such as the phasing out of uranium mining and other nuclear activities, given the extreme toxicity of the waste resulting from such activities and the fact that safe handling had proved difficult.

E. 10-Year Framework of Programmes on Sustainable Consumption and Production

1. Progress and achievements

63. Only seven years before, in 2002, at the World Summit on Sustainable Development, the world's Governments had reaffirmed their commitment to safeguarding the environment for future generations. The agencies of the United Nations system had been working together to implement several action programmes, as well as to support the initiatives of many Governments.

64. With the vision of achieving environmentally sustainable economic growth in the region of Asia and the Pacific by promoting effective environmental policies, the participants in the fifth Ministerial Conference on Environment and Development in Asia and the Pacific, held in 2005, had proposed green growth as a viable approach to the promotion of synergy between environmental and developmental objectives. The outcomes of the Conference were noted by the Economic and Social Commission for Asia and the Pacific (ESCAP) in its resolution 61/9. Through that resolution, the Commission sought to address the major policy issues related to green growth highlighted in the Ministerial Declaration on Environment and Development in Asia and the Pacific, 2005,[8] and in the Regional Implementation Plan for Sustainable Development in Asia and the Pacific, 2006-2010.[9]

65. Eco-efficiency and resource efficiency constituted the backbone of the green-growth approach, which was being applied through a number of policies promoted in the region, including the following: (a) a green tax and budgetary reform; (b) sustainable infrastructure; (c) sustainable consumption and production; (d) the greening of business and markets; and (e) investment in natural capital. Those policies provided strong incentives for protection of the environment.

66. Regional green-growth policy dialogues and forums had been held since 2005. The three regional policy dialogues that had been held had focused on: (a) a green tax and budgetary reform; (b) public policy and a resource-saving society; and (c) the greening of business and environmental protection as business opportunities. Moreover, four meetings of the Seoul Initiative Network on Green Growth had been held to permit the discussion of economic instruments, sustainable consumption and production, and climate change concerns. The third meeting, held in 2008 in Cebu, Philippines, in cooperation with the Asia-Pacific Roundtable for Sustainable Consumption and Production, had addressed issues related to sustainable consumption and production.

67. Mobilizing and refocusing the global economy towards investment in clean technologies and natural infrastructure such as forests and soils was the best bet for achieving real growth, combating climate change and triggering an employment boom in the twenty-first century.

68. On 22 October 2008, UNEP and leading economists had launched the Green Economy Initiative. The Initiative, which would initially run for a period of two years, had three key elements: the Green Economy Report, the Green Jobs report, and the Economics of Ecosystems and Biodiversity study. The Green Economy Report would provide an overview, analysis and synthesis with regard to how public policy could help markets to accelerate the transition towards a green economy.

69. In the region of Asia and the Pacific, UNEP was currently working with China and the Republic of Korea on the drafting of national reports on the green economy. In addition, capacity-building activities were being carried out and discussions with Asian countries on the development of country studies were ongoing.

70. Moreover, the circular economy adopted by the Government of China as the development model for that country in its most recent five-year plan placed

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[8] *The Fifth Ministerial Conference on Environment and Development in Asia and the Pacific, 2005* (United Nations publication, Sales No. E.05.II.F.31), annex I.

[9] Ibid., annex II.

emphasis on the most efficient use and recycling of its resources, as well as on environmental protection.

71. The 3R Initiative had been proposed by the Government of Japan, aimed at building a society with a sound material cycle through the effective use of resources and materials, and had been agreed upon as a new initiative of the Group of Eight at its Sea Island Summit, held in June 2004. The "3R" platform, which was an implementing mechanism for activities to be carried out in the developing countries of the region of Asia and the Pacific, had also been promoted at the Ministerial Conference on the 3R Initiative, hosted by the Government of Japan in April 2005.

72. The ESCAP-UNEP sustainable consumption and production help desk had been established in 2006. Its mission was to promote innovative practices in the area of sustainable consumption and production in Asia and the Pacific. The help desk acted as an information hub, jointly organized and hosted meetings, and developed specific partnerships with other agencies regarding sustainable consumption and production. Since June 2009, the help desk had hosted a regional training-of-trainers course on the development and application of green-growth policy tools.

73. The region had proved fertile ground for the implementation of a number of global and regional initiatives: the joint Programme on Resource Efficient and Cleaner Production in Developing and Transition Countries, of the United Nations Industrial Development Organization and UNEP, addressed sustainable industrial development through environmental protection, and the multi-country regional technical assistance programmes of the Asian Development Bank and the Network for Industrial Environmental Management and Greenhouse Emission Reduction from Industry in Asia and the Pacific programmes of UNEP addressed the cross-fertilization of information and the sharing of knowledge. Furthermore, in Manila in September 2009, the participants in the International Conference on Green Industry in Asia had adopted a ministerial declaration on the promotion of green growth, green industry, green jobs and sustainable production.

74. In most countries, the tools and initiatives related to sustainable production were more advanced than those related to sustainable consumption. In particular, tools and initiatives for cleaner production, including case studies, human capacities, legislation and networks, received a significantly higher rating throughout the region. That was most likely the result of a concerted international effort over the previous two decades to build cleaner production capacity in the region. National Cleaner Production Centres were playing an important role in that regard. Countries with such Centres had made further progress in the implementation of cleaner production.

75. In all the countries of North-east Asia, there were various cleaner production programmes and laws promoting the efficient use of resources. A circular economy that required responsibility on the part of producers beyond the production stages was also in place in countries in the subregion. National Cleaner Production Centres in those countries were engaged in formulating policies and management methods, developing cleaner technologies, operating websites providing the public with ready access to those data, and conducting pilot projects on cleaner production auditing — for example, in the pulp and paper industry — in collaboration with industries in other economies.

76. The majority of the countries in South-east Asia had National Cleaner Production Centres, which were quite active, spearheading the cleaner production activities in those countries. Activities included accrediting ISO 9001 and ISO 14001 certificates, conducting awareness-raising seminars, and producing and disseminating cleaner production information and training tools.

77. National round tables had been held in a number of Asian countries, including China and India, in cooperation with the Asia-Pacific Roundtable for Sustainable Consumption and Production. The two national round tables on sustainable consumption and production that had been held in India in 2006 and 2007, in Mumbai and New Delhi, respectively, had been organized by the Society in Action Group, an all-volunteer Indian non-governmental organization that had been promoting sustainable consumption and production since 2003.

78. In New Delhi in February 2009, the Society in Action Group had held a meeting of the Marrakech task forces in India, to facilitate their task of documenting best practices, to initiate project collaboration and to encourage intraregional and interregional information exchange. The discussion had focused on green growth and on sustainable lifestyles and related education, tourism, public procurement, buildings, construction and products.

79. As a vision and overriding goal, sustainable consumption and production was easy to embrace as the only acceptable long-term strategy for human survival. Determining how to get there would be quite difficult.

2. Challenges and constraints

80. Despite the region's high poverty level, consumption, as measured by the ecological footprint, exceeded the available bioproductive area per capita in at least 18 countries. The region had been experiencing high-intensity energy use, which had given rise to various pollution concerns. For example, transportation had contributed to pollution; hence, the importance of public transport policies had been stressed, as well as the promotion of clean transport technologies.

81. Other important challenges in the region included upscaling and mainstreaming sustainable consumption and production achievements, as well as improving coordination among various stakeholder initiatives to optimize resource consumption and prevent duplication.

82. The gross inequities reflected in the current patterns of resource consumption both within and among nations would need to be corrected if humanity was to build the kind of world partnership between North and South that was required in order to resolve global environmental problems. For instance, from 1994 to 2004, there had been a 40 per cent discrepancy between the subregions with the highest and the lowest steel consumption rates.

83. Most countries in the region faced institutional challenges: greater political will was needed, the roles of Government agencies should be clarified, budget allocations needed to be optimized (according to recent estimates, Government spending on environmental protection amounted to less than 1 per cent of GDP in countries in Asia and the Pacific), and access to justice should be enhanced. Over the next 50 years, the global economy would need to respond to the challenges of both the inner limit of sustainability (inequality) and the outer limits of sustainability (environmental constraints).

84. There was a need to invest in people who were dedicated and willing to commit themselves to environmental governance. That was a common challenge in Asia, and it was perhaps the most urgent: a budget could be sourced as economies grew, but skilled personnel could not be bought off the shelf.

85. The trading of secondary materials in the region of Asia and the Pacific was one concern that entailed the development of environmental and legal issues. While importing second-hand materials was an alternative to using raw materials for production, it was also a means of transferring the responsibility for final disposal to lower-income countries that might not have the capacity to carry out that task in an environmentally sound manner.

86. Other important constraints for the region were the challenges of energy efficiency, sustainable transport/mobility and integrated waste and water management; the lack of a financial and economic framework for sustainable consumption and production; the need for sustainable procurement; the limited mainstreaming of sustainable products and services; insufficient education and information regarding sustainable consumption and production and sustainable lifestyles; insufficient awareness about how to increase business competitiveness through sustainable consumption and production; and challenges in terms of unplanned urban and rural development and poverty alleviation.

3. Policy options/way forward

87. Strategic sustainable consumption and production programmes, such as green public procurement programmes, could be launched as both regulatory and market-based instruments in economies whose entire commodity markets were dominated by public procurement. With the public sector taking the lead, green public procurement programmes would have a strong steering effect on the private sector and make responsible purchasing mandatory for all public authorities.

88. Clear sustainability targets with indicators (for example, in the areas of resource use intensity, emissions, green public procurement and green products) should be identified at both the national and local levels. Enforced through models and examples, such targets should be properly identified for and communicated to stakeholders.

89. There was a need to translate the policies, programmes and initiatives of the public and private sectors into public and private investment in green technology. The objective was to create momentum for investors and to emphasize to them that investment in green technology was the most viable option for sustainable economic growth in Asia and the Pacific.

90. Although sustainable production patterns were often presented as the most important need of economies in Asia and the Pacific, there was an equal need to promote such patterns. This applied both to the individual consumption decisions of citizens and to corporate and public consumption decisions. Some countries, such as Bhutan, with its "gross national happiness index"; Thailand, with the "sufficiency economy"; the Republic of Korea, with its strategy for "low-carbon green growth"; and China, with the "harmonious society", had successfully addressed those issues and had taken the lead in setting positive examples in the region.

91. Concrete steps could be taken through the development and implementation of a range of economic instruments to ensure sustainable production and consumption

patterns and guarantee that the ecological consequences of using natural resources would be reflected in prices.

92. Priority should be placed on the need for capacity-building in terms of human capability, technological know-how and leapfrogging options.

93. Given the similarities among and the interdependence of many economies belonging to the same subregion, the benefits of simplification and benchmarking could be easily realized through strengthened subregional cooperation in the area of sustainable consumption and production.

94. Many of these regional efforts could be traced back to the United Nations Conference on Environment and Development, at which sustainable development had been defined as the objective of an umbrella programme. The sustainable consumption and production concepts developed as a result still needed to be incorporated into the main focuses of many economies in the region of Asia and the Pacific. A comprehensive strategic and policy approach was necessary and urgent if greater resource efficiency was to be achieved. It was also important to integrate industrial firms, networks or chains of companies, eco-industrial parks and regional infrastructures into a broad system to support resource optimization.

95. There was a need to incorporate long-term sustainable development principles into short-term interventions. Thus, infrastructure investment and economic stimulus policies would not lock economies into wasteful consumption patterns in the future.

96. Developing countries constituted the majority of the economies in Asia and the Pacific, and those countries had strong civil society and industry sectors that could be tapped for the realization of sustainable consumption and production programmes. Governments in the region should encourage and empower those sectors as partners in the promotion and implementation of such programmes.

97. Both ESCAP and the International Environmental Technology Centre of UNEP had spearheaded the collection of data on environmentally sound technologies and the documentation of indigenous technologies. Such knowledge-sharing could be the prime asset of the region. There was a need to expedite the dissemination and operationalization of those strategic initiatives.

98. In that respect, knowledge and know-how concerning sustainable consumption and production practices and tools had been developed and utilized by many organizations, including the International Green Purchasing Network and the Thailand Environment Institute, which advocated green procurement, eco-labelling and life-cycle management in the region of Asia and the Pacific. However, those practices and tools had not yet been widely disseminated. Information platforms and networks that could support the policymaking process at the national and regional levels existed but needed greater promotion.

99. A comprehensive local, national and regional education master plan aimed at making people better-informed consumers was suggested at the meeting. Such education should take the form of: (a) formal and complementary education programmes conducted within the framework of existing education systems in the public sector; (b) campaigns and movements on the part of civil society; and (c) corporate practices reflecting social responsibility, carried out by private

companies. Such a master plan would be most efficient if it were based on a participatory approach that would facilitate success at the local and national levels.

100. Given the role played by livestock in poverty reduction, food security and sustainable development, as well as the fact that approximately 1 billion of the world's poorest people depended on animals as a source of food, livelihoods and social status, it would be beneficial to consider animal welfare in the formulation of sustainable consumption and development policies.

101. A series of prioritized horizontal and sectoral programmes on sustainable consumption and production had been identified as the input contributed by the region of Asia and the Pacific to the 10-Year Framework of Programmes on Sustainable Consumption and Production, to be discussed by the Commission on Sustainable Development at its eighteenth and nineteenth sessions.

IV. Cross-cutting issues

A. Progress and achievements

102. The principle of the oneness of humankind should be fully recognized as a principle of international collaboration, and ethical, moral and spiritual approaches should be encouraged in discussions on sustainable development. Greater awareness of the interconnectedness of the spiritual and material aspects of humanity should be fostered. Sustainable development could not be discussed from a purely material point of view; global environmental and financial crises had shown that that approach was flawed. Fundamental obstacles to sustainable development included nationalism, ignorance of the plight of the less-privileged, materialism, gender inequalities, ineffective and inequitable governance structures and corruption.

103. At the national level, numerous actions had been undertaken, ranging from the development and implementation of policies, strategies and plans to the implementation of legislative, regulatory and fiscal measures (including the application of economic instruments) as well as institutional and social measures, such as green procurement, eco-labelling, information disclosure and awareness-raising, and technical measures aimed at cleaner production. Those measures had been based on the principle of "avoid, shift and improve". Avoid and shift measures had been used mainly in developed countries of the region.

104. In response to the appeals set out in Agenda 21[10] and the Johannesburg Plan of Implementation, many countries had recently developed national strategies for sustainable development. Those strategies addressed sustainable production and consumption, as well as issues related to the thematic cluster, such as transport, chemicals, waste management and mining. The formulation and implementation of national sustainable development strategies in various forms reflected the concern of policymakers to incorporate environmental issues into national development agendas.

[10] *Report of the United Nations Conference on Environment and Development, Rio de Janeiro, 3-14 June 1992*, vol. I, *Resolutions Adopted by the Conference* (United Nations publication, Sales No. E.93.I.8 and corrigenda), resolution 1, annex II.

105. The motivation behind the green-growth agenda was the desire on the part of a number of countries in the region to promote sustainable consumption and production patterns. In addition, the majority of the countries in the region had addressed the emerging challenges of achieving sustainable development by making their legislation more responsive to the multidimensional requirements of the integration of their national environmental and development concerns.

B. Challenges and constraints

106. The increasing number of actions taken by Member States in the region, as well as supportive regional and international actions, highlighted the growing need to integrate environmental sustainability into the thematic cluster with a view to addressing the development challenges of both today and tomorrow. Recent crises had highlighted the fact that the ecological and social imbalances reflected in current economic growth patterns were not isolated, but closely interlinked. Addressing them would require that those linkages be recognized and that holistic and integrated approaches be adopted to increase the resilience of socio-economic systems. In order to do so, countries in the region needed to focus on environmentally sustainable and socially inclusive policies and actions.

107. The main challenge in promoting sustainability within the framework of the thematic cluster was technical: to decouple economic growth from environmental degradation, while preventing a rebound effect (for example, by increasing resource and energy efficiency, de-materializing and moving to a sustainable, low-carbon economy). The major economic challenge lay in providing a policy framework that would permit the internalization of social and environmental costs in order to affect private and public choices. That would be accomplished through a combination of policy levers, incentives, human settlement planning and investment in infrastructures, such as those for transport and waste management.

108. Significant challenges were also posed by a lack of explicit policy directions, weak institutional capacities, overlapping institutional mandates, a low level of environmental expenditure, knowledge gaps, a lack of technology, inadequate research and development, and lack of a consumer tradition. Further constraints included inadequate funding resources and a lack of access to alternative financing options. Challenges in other policy areas (regulatory, incentive-based, social and institutional) included the following:

(a) Stimulating demand for and the supply of sustainable products and services in the market, which would involve the creation of new economic activities and worthwhile jobs, within the carrying capacities of ecosystems;

(b) Mainstreaming the sustainable use and management of natural resources, including minerals and chemicals, in the decision-making processes of Governments, the private sector and civil society organizations;

(c) Enhancing social development through sustainable investment in people and communities, as highlighted in the Global Green New Deal;

(d) Coupling economic development with the creation of worthwhile jobs and increased well-being;

(e) Universally adopting sustainable public procurement policies and measures;

(f) Raising people's awareness about the impacts of their consumption choices and helping to shape their values through information and education, in order to promote changes in consumption and production patterns;

(g) Developing institutional capacity through knowledge management, technology transfer, education, training and awareness-raising;

(h) Promoting cooperative frameworks and partnership incentives for action at all levels and for international and regional cooperation;

(i) Enhancing the participation of major groups, in particular women and local authorities, as well as the private sector and local communities, in planning, decision-making and implementation;

(j) Maintaining a high growth rate while, at the same time, ensuring environmental sustainability;

(k) Ensuring that developed countries would meet their commitments with regard to common and differentiated responsibilities;

(l) Empowering communities to take action at the local level;

(m) Resolving issues related to conflicting policies;

(n) Addressing the absence of quantitative baseline information;

(o) Developing specific mechanisms to address knowledge gaps as well as the dissemination of information;

(p) Conducting gender analysis and ensuring equitable approaches;

(q) Developing mechanisms and strategies for the scaling-up of best practices;

(r) Addressing the special needs of the least developed countries and landlocked developing countries.

109. As a cross-sectoral issue, poverty remained among the principal and persistent challenges in the region. In the past, rapid economic growth had been achieved in the region of Asia and the Pacific through the externalization of environmental costs. Costs related to protecting labour and providing housing and social security had also been externalized. Thus, while absolute poverty had declined, relative poverty and disparities had increased.

C. Policy options/way forward

110. Given the fact that a number of common issues must be addressed in order to respond effectively to the region's challenges in various thematic areas (for example, capacity-building, technology transfer, financial resources and information gaps), it would be useful to strengthen regional forums so that they included the sharing of successful practices in such areas and the discussion of mechanisms for replicating and scaling up those practices. Extending successful models of bilateral cooperation to the framework of multilateral programmes should also be considered.

Furthermore, the usefulness of interregional cooperation, including that between Europe and Asia and the Pacific, was highlighted.

111. The integration of environmental sustainability into various development policies, including those promoting green growth, offered tremendous opportunities for the region. With its clear linkages to employment, livelihoods and improved access to services, integration had the potential to reduce poverty by providing economic stimuli and creating jobs. For example, the promotion of sustainable waste management or sustainable transport systems could trigger socio-economic development and create green jobs.

112. Similarly, industrial environmental management provided an opportunity to improve the efficiency of industrial use of energy and resources for cleaner production. However, it should be supported through incentives provided by market-based instruments, such as environmental taxes and user fees, targeted subsidies and eco-labels. In addition, it required Governments to provide the physical and social infrastructure necessary for efficient industrialization. Human resource development (through the cluster approach) would improve industrial efficiency through innovation.

113. Therefore, the policies and actions required for the development of resilient socio-economic systems should help to resolve the problems related to both cross-sectoral and thematic issues and should receive greater attention in national, regional and international dialogues. There was a need to recognize the linkages among the social, economic and ecological systems.

114. The careful monitoring of all measures aimed at sustainable development across sectors should be taken up by the Governments of Member States, and outcomes should be evaluated for further modification and improvements in order to optimize the benefits for the people in the region.

V. Concluding observation

115. Participants emphasized the linkage between ongoing climate change negotiations and the current thematic cluster of the Commission. Any decisions taken at the fifteenth Conference of the Parties to the United Nations Framework Convention on Climate Change, which would be held in Copenhagen from 7 to 18 December 2009, might have an impact on the deliberations of the Commission at its eighteenth and nineteenth sessions, and on the implementation actions taken subsequently at the national and international levels. For that reason, it was suggested that participants take appropriate action to transmit the outcome of the regional implementation meeting to the forthcoming United Nations Climate Change Conference.

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Summary by the Chair of the regional implementation meeting for the Economic Commission for Europe region**

Summary

The fourth Economic Commission for Europe (ECE) regional implementation meeting on sustainable development was held on 1 and 2 December 2009 in Geneva. In accordance with the multi-year programme of work of the Commission on Sustainable Development, the meeting assessed the region's progress in implementing sustainable development commitments in the thematic clusters of transport, chemicals management, waste management, mining and sustainable consumption and production patterns. Delegates also addressed cross-cutting issues and linkages between them, and reported on the implementation of decisions taken by the Commission at its seventeenth session. As a basis for discussions, the ECE secretariat had prepared a background note on the aforementioned thematic clusters (ECE/AC.25/2009/3) with contributions from various partners in and outside the United Nations system, including the United Nations Environment Programme; the secretariats of the Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal, the Rotterdam Convention on the Prior Informed Consent Procedure for Certain Hazardous Chemicals and Pesticides in International Trade, the Stockholm Convention on Persistent Organic Pollutants; the Montreal Protocol on Substances that Deplete the Ozone Layer; and the Strategic Approach to International Chemicals Management. The secretariat prepared two background documents (ECE/AC.25/2009/4 and ECE/AC.25/2009/5) on education for sustainable development, one of the cross-cutting issues discussed. The outcomes of the discussions are reflected herein.

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I. Overview

1. In preparation for the eighteenth session of the Commission on Sustainable Development, the member States of the Economic Commission for Europe (ECE) and representatives of major groups, United Nations agencies and other international bodies met in Geneva to review the ECE region's progress in implementing sustainable development commitments and goals. The regional implementation meeting examined the following thematic clusters: transport, chemicals management, waste management, mining and the 10-Year Framework of Programmes on Sustainable Consumption and Production Patterns.

2. The meeting focused on evaluating the progress achieved and the obstacles and constraints remaining in each area, the priorities for future activities and strategies, and the interlinkages between the thematic clusters and cross-cutting issues.

3. The background documentation and interventions made at the meeting indicated that progress in sustainable development differed significantly from one subregion to another, and that it was affected by economic, infrastructural and historical aspects that must be taken into account in the regional and global review.

4. While the thematic clusters had their distinct challenges and priorities, some of the cross-cutting issues and interlinkages had particular relevance in the region, including the ongoing introduction and development of education for sustainable development and work on poverty reduction. These should be taken into account and further built upon during discussions on next steps and ways forward for each of the clusters in the regional context.

5. Further progress in the areas discussed required a broad range of policies and measures, including a mix of regulatory and voluntary approaches and the engagement of all stakeholders, including the private sector, to strengthen the work in partnership.

6. In addition, many participants stressed the special importance of sustainable consumption and production as it relates to the other thematic clusters. Sustainable consumption and production should therefore be considered as a cross-cutting issue under the other thematic clusters. Furthermore, it is a process derived directly from the Johannesburg Plan of Implementation.

7. Participants commended the very active involvement of the major groups in the meeting, in terms of both their attendance and their role and engagement in the discussions. They suggested that the Bureau of the Commission on Sustainable Development explore ways to ensure a more interactive dialogue with major groups during the eighteenth session of the Commission.

8. The present summary by the two Chairpersons addresses some of the main issues discussed at the meeting, including major trends, challenges and proposals for the way forward in each thematic area.

II. Transport

9. The transport sector was acknowledged as one of the major contributors to the region's economic development, as it supported trade, employment and development. At the same time, the sector also had significant adverse effects on the environment, including through the level of carbon dioxide emissions, the consumption of fossil

fuels, air and noise pollution and the loss of land and biodiversity. The sector's impacts on the social aspects of the region's development, including health and safety, were also considerable.

10. Participants noted that over the past several decades, significant efforts had been made to promote the sustainability of transport sector policy and investment in both economic and environmental terms. Participants exchanged information on a number of legal, policy and practical measures at the national and local levels aimed at increasing transport sustainability.

11. The importance of developing transport infrastructure and services conducive to sustainable development was highlighted. There was a disparity in the success of transport sustainability efforts between the subregions, with countries in Eastern Europe, the Caucasus and Central Asia and South-Eastern Europe facing major infrastructure, management and funding challenges. Participants noted that with respect to the development and application of global and regional policies and programmes, the specifics of individual subregions should be taken into account through a differentiated approach.

12. There was general agreement that all modes of transport, including motorized vehicles, rail networks, shipping and aviation, should be considered to increase the sector's sustainability. A multimodal approach to transport was key to achieving this goal. However, this would require further investment in infrastructure, for instance to modernize ports, standardize freight containers and improve links between various modes of transport. The advantages of speed rail transport development were also underlined.

13. Many participants noted that a reduction in the use of unsustainable modes of transport, in particular private vehicles, was required to reduce the sector's environmental impacts. A number of examples of efforts to achieve such reduction were provided. Better use of spatial planning to reduce mobility needs and facilitate sustainable transport was seen as a strategic approach. Participants called for strategies combining different polices and measures for avoiding transport where possible (for example, through teleconferencing, other technical solutions and better urban design) and for better coherence between infrastructure investment and spatial planning.

14. A shift to cleaner transport modes was needed. Among the other effective measures identified were: (a) promoting non-motorized means of transport such as walking and cycling; (b) developing supporting infrastructure, including safety measures; and (c) strengthening public transport systems. A targeted shift of freight and passenger traffic from roads to rail could be achieved through a mix of economic incentives for and investment in railway infrastructure.

15. A number of participants stressed the importance of innovation in promoting cleaner technologies and fuels, noting that the ECE region had made significant progress with the reduction of per-vehicle emissions of gaseous pollutants and particulates. At the same time, the level of overall emissions remained high due to the overall increase in the number of vehicles. A strategic approach to the introduction of cleaner and more efficient vehicles was needed at the regional and national levels. This should include proactive innovation policies that support research in alternative fuels and a shift to more efficient technologies, such as electric, hybrid and fuel cell

vehicles. However, some participants raised concerns regarding the production and use of biofuels, due to their impact on land use and to the small quantities produced.

16. Voluntary initiatives of the private sector could also contribute to progress. One example was the voluntary commitment of the road transport industry to reduce carbon dioxide emissions by 30 per cent by 2030, through investments in vehicle technology, driver training and innovative logistic concepts. The greater involvement of ECE countries in global initiatives such as the Partnership for Clean Fuels and Vehicles and the Global Fuel Economy Initiative, which promoted technology and knowledge exchange, was seen as beneficial in this regard.

17. While the development and market introduction of alternative fuel vehicles helped to reduce carbon dioxide emissions from transport, the availability of no-carbon electricity was one of the areas in which participants called for policy action. In that connection, energy production methods and energy efficiency in transport needed to be considered, along with improvements in vehicle technology and infrastructure management.

18. Several speakers noted that sustainable transport solutions should be tied to the opportunities afforded by the current economic crisis, for example by orienting stimulus packages towards the development of sustainable public transport infrastructure. Economic tools such as stimulus packages and business incentives, as well as disincentives (for example, kilometre charges for vehicles) and the internalization of external costs needed to be applied to promote sustainable transport models.

19. Participants noted that subregional and regional cooperation was important for building sustainable transport infrastructure, promoting multi-country infrastructure planning and developing common infrastructure standards. Exchanges of experience and technology transfer to less developed countries in the region with respect to such issues as sustainable transport infrastructure were also necessary, in particular for areas with specific transport challenges, such as mountainous regions.

20. Participants voiced their support for the Transport, Health and Environment Pan-European Programme, through which the key challenges to achieving sustainable transport patterns were being addressed. The programme was also encouraging national and local Governments to pursue an integrated approach to policymaking and was helping to put sustainable mobility at the forefront of the international agenda.

21. Finally, a number of speakers highlighted the importance of public awareness and educational initiatives aimed at promoting and facilitating behavioural change. These included increased non-motorized transport and public transport use, especially in urban areas.

III. Chemicals management

22. The meeting noted that the chemical industry had significant economic importance for many ECE countries, with Western Europe, the Russian Federation, the United States of America and Canada ranking among the largest chemical producers in the world. With the consumption and production of chemicals continuing to grow globally, the sector's impact on the environment and social considerations in the ECE region made sound chemicals management one of the key

priorities. The Goal of the Johannesburg Plan of Implementation to minimize the adverse effects of chemical production on human health and the environment by 2020 therefore held particular significance for the region.

23. While chemicals were an important driver of economic growth and a source of support for livelihoods, participants recognized the enormous danger posed by chemicals in the absence of sound chemicals management, which was considered to be a key component of corporate social and environmental responsibility and an important factor in sustainable development.

24. The meeting identified a number of critical challenges for sound chemicals management: (a) increasing chemical manufacturing and use, in particular in developing countries; (b) increasing product development and production; and (c) growing food production, accompanied by corresponding increases in chemical fertilizer and pesticide usage. In the ECE region, additional challenges were posed by legacy chemicals, such as lead paints and asbestos, and by hazardous waste sites.

25. Many participants stressed the adverse impact of obsolete chemicals, in particular obsolete persistent organic pollutants and pesticides, on human and animal health and the environment. They emphasized the need to raise international awareness of this issue and to discuss it during the current cycle of the Commission on the basis of reports from the Food and Agriculture Organization of the United Nations and other relevant organizations, agencies and institutions.

26. Many participants highlighted the need to decrease chemicals use in agriculture through sustainable agricultural practices, in particular organic farming, and to soundly manage the use, transportation and storage of chemicals.

27. At the policy level, sound chemicals management could be efficiently addressed by chemicals management being included in national sustainable development and poverty reduction strategies as well as country assistance strategies. The meeting emphasized the linkages between the goals of eradicating poverty and ensuring the sound management of chemicals. Participants also underlined that the same rules and safety standards for chemicals production and management should be applied in all parts of the world.

28. In view of the continuing increase in the production and use of chemicals, as well as the introduction of new ones, a number of participants considered it likely that global regulation of chemicals of concern would be needed in the future. Hence, further development and possible expansion of global chemicals conventions would need to be undertaken. Certain persistent organic pollutants were now regulated globally, but other chemicals of concern were not. Participants commended the decision to begin negotiations on a global convention on mercury.

29. The meeting recognized the need for more international cooperation to increase knowledge and access to information with respect to the presence of hazardous substances in products, such as electronic equipment and toys, and to reduce risk during their handling and disposal. Participants acknowledged that the information needed to conduct risk assessments was lacking for many chemical-containing products now available on the global market.

30. The meeting reiterated the importance of furthering implementation of the Strategic Approach to International Chemicals Management, an important framework for strengthening capacity for sound chemicals management that narrowed the

capacity gap between the developing and the developed worlds. The meeting recognized that through the Strategic Approach, significant progress had been made against the 2020 goal. The objectives of the Strategic Approach should be attained through partnerships between Governments and major groups, including the private sector, labour, the academic community and non-governmental organizations. A major remaining challenge for implementing the Strategic Approach was to secure sustainable long-term financial resources. Regional meetings and coordination mechanisms had played and would continue to play an important role in helping regional stakeholders advance the process. Participants highlighted the linkages between Strategic Approach and the Commission, pointing out that the two processes could mutually reinforce each other in efforts to achieve the 2020 goal.

31. To achieve the 2020 goal, including through implementing global chemicals agreements, strong political commitment and financial resources were needed. However, the broad, cross-sectoral scope of sound chemicals management meant that there was no single solution for financing its implementation; various funding partners and solutions were necessary. Participants acknowledged the urgent need to explore the role of the private sector in providing financial support for the sound global management of chemicals.

32. The meeting noted the importance of implementing the Globally Harmonized System of Classification and Labelling of Chemicals and recommended adopting a global system of recognizing and communicating risks and hazards.

33. A number of participants informed the meeting about work under way in countries and organizations to find safer alternatives to chemicals that posed a risk. They stressed the need to make this knowledge available to countries in transition and to developing countries. The meeting welcomed initiatives to improve product stewardship by industry.

34. The meeting acknowledged in particular the voluntary initiatives of the International Council of Chemical Associations, for example the Responsible Care Global Charter and the Global Product Strategy, as essential contributions to the Strategic Approach and as improving the sound global management of chemicals. It welcomed the plans of the International Council: (a) establish a base set of hazard and exposure information adequate for conducting safety assessments of all chemicals in commerce; (b) improve global capacity to implement best assessment practices and management procedures, especially in developing countries; (c) share relevant product information with co-producers, Governments and the public; and (d) make information on chemicals publicly available through the Council's Global Product Strategy-information technology portal.

35. The meeting took note of efforts by many countries in the region to advance sound chemicals management through new horizontal legislation that covered the registration, evaluation, authorization and restriction of chemicals using a life cycle approach. European Union legislation, for instance, could be split into a number of self-standing modules that could be of interest to countries when they created their own chemicals legislation. Responsibility had shifted from Governments having to prove risks to manufacturers, importers and downstream users having to ensure that the substances they developed, used and placed on the market did not harm human health or the environment.

36. The meeting emphasized the importance of the precautionary approach in reducing chemical risk. In particular, the need for a continuous reassessment and risk management of currently registered pesticides (for example, storage and disposal of pesticides) and the review of new pesticides was highlighted. Managing and reducing the risk of industrial chemicals could be achieved by setting strict conditions on the production, processing, use, import or disposal of a new chemical before it entered into commerce, and also on the significant new use of an existing chemical. A comprehensive set of data and information about a chemical should be made available to regulators and users before that chemical was sold in accordance with the "no data, no market" rule. With respect to nanoscale materials, steps needed to be taken to assess their risks.

37. Delegates stressed the importance of public access to information on chemicals (the "right to know"). Companies should be obliged to make publicly available data on the health and environmental effects of produced or imported chemicals. Databases on toxic chemical releases should also be made available to the public and be reported annually. Furthermore, public access to information should be increased through public notices and meetings. In the ECE region, the Protocol on Pollutant Release and Transfer Registers to the Convention on Access to Information, Public Participation in Decision-making and Access to Justice in Environmental Matters (Aarhus Convention) had entered into force on 8 October 2009. It was the first such legally binding international instrument to enable access to information and information-sharing on chemicals and could serve as a model for other regions.

38. With regard to capacity-building, the meeting recognized the usefulness of sharing good practices. It noted the role of cleaner production centres in building capacity for sound chemicals management.

IV. Waste management

39. The meeting recognized the significant impact that waste and hazardous waste had on the environment, human health and security. Sound integrated waste management was therefore among the key preconditions for sustainable development. It was also required for the achievement of the Millennium Development Goals, in particular the sanitation- and health-related targets. The ECE region was among the major generators of waste globally, with the amount of waste continuing to increase, although the rate of increase differed from country to country and between subregions.

40. Participants noted that significant progress had been made in many parts of the region through the implementation of global and regional multilateral environmental agreements. Waste policies in the European Union and North America had been successful in moving from addressing landfill use to tackling waste prevention efforts and waste recovery operations. However, the success of such policies had been diminished owing to overall economic growth, which in turn had resulted in increased waste generation.

41. With this increase across the region, a policy shift towards a resource-efficient economy, including a shift from waste management to sustainable material management, was required. This would necessitate strong interlinkages to sustainable consumption and production approaches and policies that took into account the life cycle approach.

42. Participants underlined the importance of promoting a clear waste hierarchy with the following features:

(a) Prevention should be the first and optimal solution. Prevention strategies should be based on the "polluter pays" principle, include extended producer responsibility and be addressed using a life cycle product management approach beginning in the design phase;

(b) Unpreventable waste should be recycled. To facilitate this approach, separation as well as separate collection of waste should be put into practice;

(c) Energy recovery in the waste recycling process could be another means of effective resource use after reuse or recycling;

(d) Disposal should be restricted as much as possible to waste that could not be reused or recycled. Legislative and regulatory measures were required to restrict landfills of recyclable and, in particular, biodegradable waste and to limit waste combustion (with the exception of specific categories such as medical waste). The treatment of waste (for example, biodegradation) was seen as a good solution for reducing the waste going to landfills.

43. Many participants highlighted the important role that local authorities played in waste management policymaking and implementation, and emphasized the social aspects that needed to be addressed, such as the low status of workers in the waste sector and the health hazards linked to garbage collection by women and children.

44. Awareness-raising and education, in particular to enable consumers to sort household waste, as well as legislative, permitting and financial instruments, were of crucial importance if the above objectives were to be reached. Many participants noted the cross-cutting role of promoting sustainable consumption and production.

45. The meeting discussed particular categories of waste that posed challenges across the region. These included:

(a) Electronic waste, the generation of which was one of the fastest growing segments of the waste stream. Concerns were not limited to the challenges this trend posed for waste management and recycling. The trade in and export of e-waste to developing countries and countries with economies in transition for reuse, recovery and recycling, sometimes at facilities that did not operate under sound environmental and heath safety conditions, was also a major issue. In this regard, the global workplan on electronic waste recently adopted under the Basel Convention provided a way forward for international policy on the environmentally sound management of e-waste;

(b) A long-term strategy was needed to deal with radioactive waste, which posed specific challenges in the region due to the intensive use of radioactive materials, including in the energy, military and research areas. Transportation of radioactive waste required stricter international regulation. A life cycle approach to radioactive products should also be considered at the policy level;

(c) Plastic waste disposal, including in the oceans, posed a very significant problem, not only for human health but also for the food chain and wildlife. There was a need to address the issue at the global level;

(d) Similarly, organic waste reuse had not been sufficiently addressed in international forums. Failure to separate biodegradable waste had led to greenhouse

gas emissions from landfills. Experiences in some of the region's countries demonstrated that organic waste collected separately at the source could be used to produce high-quality compost or energy through fermentation with continued composting. The latter could contribute to soil fertility and reduce the impacts on climate by averting methane emissions and sequestering carbon in the soil.

46. Many speakers addressed life cycle product management, noting that synergies should be strengthened at the international level in the ongoing work on chemicals management under the Basel, Rotterdam and Stockholm conventions. Work on life cycle chemicals management under the Strategic Approach to International Chemicals Management was considered to be of particular relevance.

47. Participants from some countries with economies in transition reported particular challenges in waste management. Production of waste was rising, owing to improving economic conditions in those countries and their reliance on natural resource extraction. Those countries were also suffering from the accumulation of hazardous waste (for example, radioactive, military and industrial waste and obsolete pesticides) generated in the past. Specific programmes and technologies were needed to safely treat and finally dispose of that waste. Legal ownership of the stockpiles could not be clearly established, and many of the countries did not have the financial or technical capacity to address the issue.

48. Eastern Europe, the Caucasus and Central Asia also faced particular difficulties in ensuring the separation of waste, in particular municipal and hazardous waste, and the separation of packaging waste. Countries did not have access to modern recycling and reuse technology or to equipment for waste collection and transportation, or for treatment of electronic or other specialized waste. In this regard, they required assistance to improve national legislation and develop national hazardous waste minimization and management plans. Technical assistance, particularly in the form of experience-sharing and the transfer of up-to-date waste management technology, was of special importance for the subregion.

V. Mining

49. The meeting acknowledged the important contribution of mining to society, as it provided essential minerals and was the source of many raw materials. The importance of mining varied across the ECE region, with the sector being of great importance to the economies of several countries. Participants noted that the region's mines were among the deepest and most efficient in the world, and that it was a leading global supplier of mining technology.

50. At the same time, mining had considerable adverse effects on the environment and society. The main environmental concerns were related to water use and quality, waste rock dumps, tailings storage areas and hazardous materials. The main social concerns were related to land acquisition, indigenous peoples and cultural heritage, and labour and working conditions.

51. Participants noted that the principal challenge of more sustainable mining was to transform mineral resource potential while at the same time creating sustainable benefits, addressing social needs and protecting the environment. Mining could and should contribute to sustainable development, but the industry needed to address environmental and social concerns and promote measures to create lasting benefits.

Among the main environmental considerations were land use planning, waste management, ecosystem risk management and mine closure and rehabilitation. In addition, good governance, with transparency and accountability, was an essential prerequisite for sustainable mining practices and for the adoption of corporate social and environmental responsibility approaches.

52. Opportunities for sustainable mining were growing in the region, with increased exploration, improved available data, newer technologies and changed economic conditions. The meeting noted the intention of one country to develop, for the nineteenth session of the Commission, a policy proposal on the contribution of mining to sustainable development. In the ECE region, the countries of South-Eastern Europe and Central Asia faced the greatest challenges in terms of sustainable mining.

53. The meeting agreed that good practices in mining required multi-stakeholder consultation and dialogues which, in turn, called for greater transparency, efforts to make information accessible to decision makers and the broader public, and a commitment to ensuring corporate social responsibility and embracing environmental stewardship. With respect to environmental concerns, good practices should include environmental assessments throughout the entire life cycle, long-term monitoring, and protection and enhancement of biodiversity and land. Long-term planning, including strategic environmental assessment, at all stages was the key to successful outcomes.

54. The meeting took note of a number of initiatives promoting sustainable mining. These included the Resource Endowment Initiative and the European Commission guidance on development of mining activities in the Natura 2000 Networking Programme. Several activities had been undertaken at ECE to address specific problems related to mining activities. Safety guidelines and good practices for tailings management facilities had been developed in 2008 under the ECE Convention on the Transboundary Effects of Industrial Accidents and Convention on the Protection and Use of Transboundary Watercourses and International Lakes. The guidelines supported efforts by Governments and stakeholders to limit the number of accidents at tailings management facilities and the severity of their consequences for human health and the environment. Recognizing the many benefits associated with the coal mine methane recovery, ECE, with support from the Environmental Protection Agency of the United States and in close cooperation with the Methane to Markets Partnership, had launched a programme in 2004 to promote best practices and provide technical assistance in planning, designing and financing coal mine methane projects.

55. In the framework of the Environment and Security Initiative, several projects had been launched to assess the security risks of tailings sites in South-Eastern Europe and Central Asia.

56. At the global level, the Intergovernmental Forum on Mining, Minerals, Metals and Sustainable Development had been established in 2005 to improve, enhance and promote the contribution of mining to sustainable development. The Forum was working to develop a policy framework for mining that would be delivered to the Commission in 2011.

57. Participants noted that improvements in the mining sector required particular efforts by the mining industry and the involvement of other key stakeholders. The International Council on Mining and Metals had been established as a platform for

industry and other key stakeholders to share experiences and develop solutions based on sound science and sustainable development principles. Furthermore, the European Technology Platform on Sustainable Mineral Resources had been established to strengthen minerals sector technology and minimize its footprint.

58. Regarding the measures needed to avoid the spreading to other regions of mining impacts on environment and human health, several solutions were proposed, including: (a) the adoption of national integrated raw-materials policies; (b) the application of integrated cross-sectoral approaches to land-use management; (c) the promotion of a more sustainable raw materials supply within countries; and (d) support for innovation and competition for investment by mining companies.

59. Participants stressed the need for effective and efficient approaches to the funding of mine closures, in particular to ensure the environmental safety of closed mines. Strengthening certification systems in the mining sector and encouraging extractive companies to consider self-regulation would contribute to sustainable development and poverty eradication. Mechanisms should be established to promote capacity-building, the exchange of experiences, the identification and dissemination of best practices and the creation of an appropriate knowledge base on mineral resources. The need to better integrate biodiversity conservation goals into national mineral extraction plans was also highlighted.

VI. 10-Year Framework of Programmes on Sustainable Consumption and Production Patterns

60. Discussions on this theme built upon the outcomes of the preparatory meeting on sustainable consumption and production for the fourth regional implementation meeting. That informal regional meeting, held on 30 November 2009, had been organized by the United Nations Environment Programme with the support of ECE. Meeting participants recognized that sustainable consumption and production, in addition to being an important priority for the ECE region, was both an overarching objective of, and a prerequisite for, sustainable development. The need to support and strengthen the broad range of ongoing activities and policies contributing to sustainable consumption and production, and to build subregional, regional and international cooperation was highlighted. This was especially important given the scale of the undertaking required to decrease the negative impacts of current consumption and production patterns. The informal meeting also helped to identify areas for further programmes and policies for sustainable consumption and production, whose design and implementation could be supported by the 10-Year Framework of Programmes on Sustainable Consumption and Production Patterns.

61. Participants in the informal meeting also recognized that the promotion of sustainable consumption and production and the implementation of a future 10-year framework of programmes could support a shift to a green economy and should also play a key role in supporting social development and the fulfilment of the Millennium Development Goals.

62. During the meeting, participants reviewed some of the challenges and achievements relating to the shift to sustainable consumption and production. Practical experience had shown that a move to sustainable consumption and production could: (a) deliver important social benefits; (b) enable countries,

companies and communities to "do more and better, with less"; and (c) increase net welfare gains from economic activities by reducing resource use and depletion as well as pollution.

63. During the discussions, participants noted that actions to promote sustainable consumption and production could be a powerful lever for turning environmental and social challenges into business and employment opportunities. A shift to sustainable consumption and production could also create greener and more decent jobs and support poverty alleviation. This potential should be more clearly communicated to all stakeholders.

64. Many participants highlighted the importance and urgency of developing a common vision, a strategy, clear targets and a time frame for implementing sustainable consumption and production activities. This would help to support the transition to an eco-efficient economy and to bridge the gaps between developing and industrialized countries.

65. Participants recognized that promoting and implementing sustainable consumption and production required innovative policies, with a balanced mix of instruments and incentives (regulatory, voluntary, economic and fiscal), as these instruments might not work effectively if they were applied individually. Policy packages should also address environmental and social impacts across the whole life cycle of products. Close cooperation between stakeholders was necessary, including key ministries (environment, finance, industry and social affairs), to ensure the integration and coherence of policies and programmes.

66. Examples of the following effective policies and practices for promoting sustainable consumption and production were mentioned: (a) policies for integrated pollution prevention and control; (b) legislation promoting eco-design for energy use and energy-related products; (c) environmental labelling; and (d) sustainable public procurement. Participants presented national strategies and action plans, focusing on education guidelines and toolkits for national campaigns and awareness-raising with respect to sustainable consumption and production. A number of participants emphasized the importance of green and sustainable public procurement and its potential to accelerate the shift to sustainable consumption and production, given that Governments were themselves major consumers of goods and services.

67. Many countries in the region had been active in the Marrakech Process, launched in response to the decision on sustainable consumption and production taken in Johannesburg in 2002 at the World Summit on Sustainable Development. Within the Marrakech Process, several topics had received particular attention following the creation of task forces on such topics as education for sustainable consumption, and sustainable lifestyles, tourism, products, buildings and construction and procurement. This was a good indication of what many countries considered to be the key sectors, topics or policy instruments that should be addressed under the 10-Year Framework of Programmes.

68. Challenges highlighted by participants included: (a) how to address the "rebound effect", by which growing consumption had been outstripping efficiency gains and technological improvements; (b) how to work more effectively on the demand side to reorient consumers' behaviour and purchasing choices; (c) evaluating and internalizing external short- and long-term costs of production;

and (d) the need to go beyond a "business-as-usual" approach to achieve the shift to sustainable consumption and production.

69. Participants also highlighted the need to: (a) strengthen the work on the scientific knowledge base for policy and action relating to sustainable consumption and production; (b) accelerate technological leapfrogging; and (c) establish regional and subregional platforms for collaboration.

70. Many participants supported the development and implementation of a 10-year framework, recommending that it be ambitious and comprise: (a) a declaration outlining a common vision for all countries regarding the need to promote sustainable consumption and production, with a defined framework for programme fields, overall goals in each field and an implementing structure; and (b) a series of programmes for sustainable consumption and production, with specific objectives and time frames, means of implementation, sectors and actors.

71. A number of participants highlighted the need to establish funding mechanisms to support the delivery of these programmes.

72. The following priority areas for work on sustainable consumption and production and for inclusion in the 10-Year Framework were proposed: (a) production processes; (b) sustainable products (including support for eco-design); (c) sustainable consumption and living; (d) financial incentives and policies to encourage public and private investment in sustainable consumption and production; (e) the provision of more science-based knowledge, including by drawing on the work of the International Panel for Sustainable Resource Management; (f) assistance in designing and implementing national strategies and action plans; and (g) horizontal strategies at the different governmental and intergovernmental levels to integrate sustainable consumption and production policies into sustainable development strategies and plans. Specific programmes under the 10-Year Framework could be defined in each of these fields. Participants also identified a number of priority sectors: mobility and transport, housing and construction, food, waste management, sustainable cities and sustainable tourism.

73. One participant mentioned that the 10-Year Framework should be much more comprehensive and systematic than the list of topics generated through the Marrakech Process. In this regard, it was important to learn the priorities of all countries in the process leading up to the nineteenth session of the Commission, and to define how and by whom the programmes making up the 10-Year Framework would be implemented. A related question was how existing regional or subregional sustainable consumption and production programmes could be scaled up.

74. Other key points raised included: (a) the importance of applying corporate environmental and social responsibility; (b) the need for policies and incentives to promote innovation by the private sector and other stakeholders for sustainable consumption and production; and (c) the need to bolster existing financial mechanisms to encourage investment for the shift to sustainable consumption and production.

75. Education for sustainable consumption, as part of education for sustainable development, was also recognized as a key objective that should be supported by the future 10-Year Framework of Programmes. Participants also recommended using the road map on education for sustainable consumption developed by the Marrakech Task Force to guide implementation of education programmes.

VII. Cross-cutting issues, interlinkages and implementation of decisions made by the Commission at its seventeenth session

A. Progress in implementing the decisions made by the Commission at its seventeenth session

76. The meeting noted the importance not only of focusing on the upcoming session of the Commission, but also of tracking progress in the implementation of the policy-related decisions of the Commission at its seventeenth session. Consequently, participants exchanged information on national and international activities in the current cycle. Successful examples were presented, such as: (a) the sustainability and stewardship programmes; (b) research in the area of agricultural systems and sustainability; (c) programmes aimed at strengthening urban-rural linkages; and (d) national-level sustainable development work with key stakeholders, such as farmers, forest managers, non-governmental organizations and local Governments.

77. Participants mentioned a number of international initiatives that supported implementation of the Commission's decisions, including the Global Partnership on Nutrient Management and the World Food Summit process. An intergovernmental platform on biodiversity and ecosystem services had been set up to address desertification and biodiversity loss. With regard to Africa, concrete partnerships between regional organizations and the African Union were being focused on specific priority areas such as climate change, peace and security, and the promotion of science and research.

B. Cross-cutting issues and interlinkages

78. The meeting highlighted the importance of interlinkages between the thematic clusters, noting the improved implementation of the policy options that built upon the resulting synergies. Participants pointed out that rather than isolating individual substantive issues on the Commission's agenda, policies should be focused on the interlinked nature of sustainable development.

79. Mining, transport, sustainable consumption and production and waste management were major stages in the life cycle of materials and areas that had many potential impacts on human health, employment and the environment. In this respect, participants noted that sustainable transport played an important role in ensuring effective communications, trade and migration, while having the lowest possible impact on the environment. Also, the safe production and use of chemicals was vital to protecting human health and worker safety.

80. Eradicating poverty, protecting and managing natural resources and changing unsustainable patterns of production and consumption were the three main cross-cutting sustainable development concerns that required urgent action to protect the planet's human and environmental capital. Countries had adopted a range of specific goals and targets to tackle these issues of concern and had made some progress in managing them directly. While some participants felt that sustainable, "green" growth was a driving force for sustainable development, others saw the concept of sustainable growth as being incompatible with the objective of reducing overall resource use.

81. Participants emphasized the importance of improving education, especially given its cross-cutting nature. They also noted the important role of ongoing national and regional work on education for sustainable development in addressing the issues under the thematic clusters. By incorporating sustainable development themes into the formal education of youth, and by influencing adults and communities through informal education and non-formal means, such as vocational training and capacity-building, education for sustainable development could act as a key instrument for empowering sustainable societies. A number of participants stressed the important role of the United Nations Decade of Education for Sustainable Development and the ECE Strategy for Education for Sustainable Development. The meeting took note of successful examples in the application of education for sustainable development to promote sustainable consumption and production.

82. Participants underlined the importance of policy coherence and of incorporating the cross-cutting themes into national and regional sustainable development strategies, country poverty reduction strategies and assistance programmes.

83. Finally, participants considered that coherence should be maintained between the work of the Commission and a number of important global multilateral environmental agreements and processes, and that further cooperation and coordination between international institutions and multilateral environmental agreements should be promoted.

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Summary of the discussion at the regional implementation meeting for Latin America and the Caribbean**

I. Review of issues related to thematic areas

A. A 10-year framework of programmes on sustainable consumption and production patterns

1. The movement towards sustainable consumption and production in Latin America and the Caribbean involves the multiple challenges of ensuring that the basic needs of a growing population with high poverty rates are met, and of doing so sustainably and with the involvement of the local production sector. It also requires that due consideration be given to the fact that many of the region's economies are strongly based on extractive industries and agriculture. Moving towards sustainable consumption and production requires a rethinking of values and ways of life, for which the rich legacy of the region's indigenous communities can hold important lessons. Climate change poses new challenges for sustainable consumption and production by making it necessary to move towards lower carbon economies and by creating new difficulties in efforts to meet the basic needs (particularly food and water) of the populations it affects. At the regional implementation meeting, the session on sustainable consumption and production was opened with statements by two members of the delegation of Guatemala, followed by a presentation by a representative of the United Nations Environment Programme (UNEP) on the links between sustainable consumption and production and green economies.

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Progress and achievements

2. In response to the international commitment to make advances in sustainable consumption and production, countries in Latin America and the Caribbean have taken several actions aimed at changing consumption and production patterns, both within their national borders and through subregional and regional collaboration. The Forum of Ministers of the Environment of Latin America and the Caribbean instituted the Regional Council of Government Experts on Sustainable Consumption and Production in 2003. The mandate of the Regional Council includes providing specialized assistance on sustainable consumption and production to the Forum of Ministers and to Governments; facilitating the exchange of information and experiences; assessing challenges and obstacles; and identifying sources of international funding and regional cooperation mechanisms. In line with recommendations made by the Regional Council, the Forum of Ministers made sustainable consumption and production a priority under the Latin American and Caribbean Initiative for Sustainable Development and its regional action plan. Based on the discussions at its meeting in Cartagena, Colombia, in September 2009 and at previous meetings, the Regional Council established priority areas for sustainable consumption and production in the region. A regional proposal for the 10-year framework of programmes on sustainable consumption and production was prepared, as was a regional plan of action based on four subregional plans.

3. According to a recent assessment conducted by UNEP and the Centre for Technology and Industrial Information Management (see document by the Economic Commission for Latin America and the Caribbean (ECLAC), "Sustainable consumption and production, mining, transport, chemicals and waste management: the results, trends and challenges of sustainable development in Latin America and the Caribbean"), 14 out of the 20 countries surveyed in the region have instituted mechanisms (policies, programmes, projects or plans) to accelerate change towards sustainable consumption and production. Some have also enacted regulations or adopted sectoral assessment procedures based on a life cycle approach for the energy and fuel, sugar, chemicals, construction, electric power, waste management and paper industries and in agribusiness. Some national development plans already incorporate sustainable consumption and production concepts.

4. With the support of the United Nations Industrial Development Organization, a number of national cleaner production centres have been established and can claim progress in terms of reduced water and energy consumption, waste generation and emissions.

5. With regard to subregional initiatives:

(a) In 2007, the countries of the Common Market of the South (MERCOSUR) approved a common policy for collaboration on and promotion of sustainable consumption and production, focusing on dialogue and cooperation, consumption and production practices, technological innovation, inclusion of sustainable consumption and production in formal and informal education, capacity-building and information exchange, the role of small and medium enterprises (SMEs) and sustainable procurement;

(b) The Andean Community made sustainable consumption and production a cross-cutting axis of its environmental agenda for 2006-2010. A group of Andean

consumers was created in 2003 to develop a sustainable consumption and production strategy by promoting responsible investments, establishing standards for life cycle assessments of certain products, building capacity and raising awareness;

(c) The Central American Commission on Environment and Development is currently preparing a regional policy on sustainable public procurement. The Central American subregion adopted a regional cleaner production policy for 2005-2010, a Cleaner Production Intersectoral Regional Committee and numerous successful cleaner production projects. An electronic system of waste exchange for Central America and the Caribbean was launched in 2009. The Regional Agro-environmental and Health Strategy incorporates concepts of sustainable consumption and production;

(d) The revised Treaty of Chaguaramas establishing the Caribbean Community (CARICOM), including the CARICOM Single Market and Economy, contains sustainable consumption and production elements, as does the Mauritius Strategy for the Further Implementation of the Programme of Action for the Sustainable Development of Small Island Developing States.

Challenges and constraints

6. Participants at the regional implementation meeting agreed that consumption patterns in the region were generally unsustainable because the basic needs of large segments of the population were not being met, and as a result of overconsumption by the wealthier segments, driven by a culture that places excessive value on material wealth owing to the influence of corporate policies, mainstream media and advertising. Consumer awareness of the effects of unsustainable consumption and production is limited. All of these factors lead to the consumption of often superfluous products and the frequent renewal of goods, such as motor vehicles and electronic equipment, which contrasts the serious deprivations suffered by most of the population. This situation also creates environmental problems, in particular in waste management, and strains natural resources.

7. Despite the advances mentioned above in the development of policies, programmes, plans and other instruments, as yet these have had few measurable effects in terms of concrete action. This may be partially due to the fact that initiatives have been taken only recently.

8. Climate change may lead to even greater difficulties for the poorest segments of the population in meeting their basic needs, such as water and food, and must be properly taken into account in adaptation plans.

9. One of the main structural characteristics of the region is its heterogeneous industrial base, in which large, often transnational, corporations benefit from financial and technological resources on a par with those of developed countries, while numerous SMEs, which have a significant bearing on jobs and gross domestic product (GDP), have no such resources. Despite advances in the environmental conduct of corporations, their business models are often incompatible with sustainable consumption and production principles, while SMEs often have difficulties implementing environmental regulations and sustainability policies.

Policy options

10. The regional priority areas proposed by the Regional Council of Government Experts on Sustainable Consumption and Production are: national policies and strategies for sustainable consumption and production; support for SMEs; sustainable public procurement; sustainable lifestyles; and the development of an information and knowledge management network. The regional proposal for the 10-year framework of programmes on sustainable consumption and production patterns, a summary of which is contained in the ECLAC document mentioned in paragraph 3 above, proposes policy measures related to each of these priorities, as indicated below:

Table
Priority areas for sustainable consumption and production in Latin America and the Caribbean

Priority	*Policy measure*
National policies and strategies for sustainable consumption and production	Mainstream sustainable consumption and production into national development strategies (including development policies, regulations and programmes); strengthen information, education and training on sustainable consumption and production for the population at large; quantify costs and benefits associated with the implementation of sustainable consumption and production in the region and at the national and subregional levels; promote corporate social and environmental responsibility and the concept of extended producer responsibility and life cycle analysis among firms in industrial sectors with high consumption and production levels and significant environmental and social impacts
Support to SMEs	Afford priority, at the subregional level, to sectors that provide environmental services or protect ecosystems; create or strengthen economic mechanisms and instruments that support the sustainability of the production sectors; define specific indicators for sustainable consumption and production within the framework of the Latin American and Caribbean Initiative for Sustainable Development
Sustainable public procurement	Establish high-level political leadership for sustainable public procurement and engage lead organizations; adopt a practical long-term strategy for the transition to sustainable public procurement and identify priority goods and services to commence sustainable public procurement programmes based on nationally agreed environmental and social criteria; ensure the inclusion and sustainability of SMEs in such programmes by establishing specific policy measures and instruments; create a multi-stakeholder mechanism to monitor and evaluate national sustainable public procurement programmes

Priority	Policy measure
Sustainable lifestyles	Apply new or adjusted policies for promoting the supply of sustainable goods and services at affordable prices to the public; integrate education for sustainable consumption into formal and informal educational programmes; conduct behavioural studies and assessments in order to understand the motivations behind the region's consumption patterns
Development of an information and knowledge management network	Strengthen the sustainable consumption and production information network (see www.redpyces.net) as a reference tool for disseminating and sharing information, linking different stakeholders and developing capacities

Source: Prepared on the basis of the recommendations to the Forum of Ministers of the Environment of Latin America and the Caribbean by the fifth International Expert Meeting on Sustainable Consumption and Production, approved in Cartagena, Colombia, in September 2009.

11. Participants at the regional implementation meeting stressed the need to recover traditional values and lifestyles. Changes in the media and advertising were cited as key factors in achieving sustainable consumption and production. The European experience of regulating advertising during children's programmes was mentioned. Participants also agreed on the need for the State to play a stronger role, including through regulation, education and the buying power of sustainable procurement. Progress towards sustainable consumption and production also requires enhancing participation mechanisms for multiple stakeholders. Participants at the meeting noted the positive experiences associated with the use of advisory boards and other instruments.

12. The policy areas in which it was desirable to promote sustainable consumption and production were: innovation, life cycle and supply-chain approaches to policies on production and land use; strategic environmental assessments; the incorporation of sustainable consumption and production into national development plans; voluntary private sector agreements; energy efficiency and renewability; the promotion of environmentally friendly practices in construction; the need to assess labelling and define labelling criteria in the best interest of the region; the establishment of instruments to enhance the relative profitability of sustainable activities; the expansion of markets for sustainable products; and efforts to ensure that local communities and indigenous groups receive a fair share of the benefits generated by the exploration of resources and traditional knowledge.

B. Mining

13. In many countries in Latin America and the Caribbean, the mining industry is an important engine of economic activity and accounts for a significant share of GDP and exports.

14. The realities of small-scale, informal mining and large-scale, formal mining are very different in the region. Small-scale, informal mining takes place under precarious environmental, safety and labour conditions and with inadequate technology. Mercury amalgamation, a common practice in informal, small-scale

gold mining, is a health and environmental hazard. Land degradation due to the migratory nature of the activity is also an issue. Large-scale mining has generated substantial fiscal revenues for Governments and, in some countries (and relative to other sectors), has raised environmental and social responsibility standards. However, the nature and scale of operations, together with intensive resource use (in particular water), in a context of often weak legislative and regulatory frameworks, generally results in mining practices that are at odds with sustainability. As rising metal prices have driven an increase in the intensity and geographical scope of mining activity, many environmental and social problems associated with the industry have been exacerbated. This has led civil society and national and local governments to question the net benefits of mining taking into account these environmental and social problems. Mine closures and environmental liabilities are major issues to be addressed.

15. One concern is the extent to which a fair share of the benefits generated by mining are returned to local communities and national economies, in the light of the applicable tax and royalty regimes and because Governments have not been effective in channelling the resources obtained from mining into the development of other, higher-value-added and non-extractive industries.

16. The session on mining at the regional implementation meeting opened with a presentation by the Deputy Minister of Environmental Management of the Ministry of the Environment of Peru.

Progress and achievements

17. Many countries have put in place regulatory and contractual regimes that ensure both stricter oversight of mining standards (including through environmental impact assessment) and greater domestic revenues. The issue of mine closures is on the agenda in many countries and innovative solutions are being developed. Several countries are designing policies to address the environmental liabilities of mining and the remediation of contaminated sites. Over the past few years, Governments have instituted or raised royalties, taxes and other contributions, or have invested directly in mining, through State-owned or mixed companies, thus claiming a larger share of the benefits.

18. The large-scale mining industry is recognized for having pioneered the adoption of some environmental practices in advance of national regulations. Large mining firms regularly publish reports on sustainability and social responsibility, generally in accordance with international guidelines set forth in the Mining and Metals Sector Supplement to the Global Reporting Initiative. Companies have also made progress in efficient water use and are continuing to improve their relations with the communities affected by their activities.

Challenges and constraints

19. Despite the advances made in developing regulatory frameworks, ensuring that mining contributes substantially to local and national long-term development remains a major challenge. Recent experience in several countries in the region shows that even when fiscal instruments are in place, such constraints as weak public management capacities at the local level make it difficult to ensure that mining profits are effectively invested. Many countries still lack the coordinated policy frameworks needed to provide a basis for sustainable mining that reflects

their major thematic priorities. Moreover, national and local governments often find themselves poorly equipped to negotiate with powerful corporations and enforce legislation on issues where public and private interests differ. The social benefits of mining, in particular by foreign companies, are perceived as insignificant when compared with private profits.

20. There is a high rate of informal and illegal activity in small-scale mining in the region. Informal and illegal activities are not necessarily the result of a lack of resources; they are often carried out under the control of powerful landowners and may involve tens of thousands of workers. Cases of quasi-slave labour regimes are known to the authorities. The lack of economic alternatives for these workers is one of the factors driving the continued existence of these enterprises. Activities are undertaken in environmentally sensitive areas, including areas that have been formally recognized as national protected areas. Even within formal mining, participants at the regional implementation meeting reported cases in which companies had failed to comply with commitments agreed upon with the respective Government and other stakeholders as conditions for extracting the resources.

21. Despite the advances mentioned in legislation on mine closure, provisions have not been enforced in many cases, owing to a lack of resources or of clarity with respect to the concrete obligations of mining firms. Environmental liabilities, which are related to the risks generated following the termination of a mining operation, pose a major challenge for Governments in the region. Governments must not only undertake the often costly management of those risks but also cover the costs of the effects that can subsequently materialize, which can be quite severe. Mercury contamination still has a significant effect on the region, in particular the Amazon Basin. Although technical solutions are available and have been adopted in some countries, lack of knowledge and access to these technologies, or their high cost, have hindered the elimination of mercury use.

22. Access to water has been a major source of mining-related conflict. Although the Convention concerning Indigenous and Tribal Peoples in Independent Countries of the International Labour Organization (ILO) protects the rights of indigenous communities to participate in decisions on projects in their areas, the historical reality and asymmetrical position of these communities in relation to large corporations has impeded their full exercise of this right. Regarding water and other issues, formal venues for stakeholder participation and conflict management are inadequate, and as a result, conflicts are often even exacerbated instead of being prevented or appropriately managed.

23. Many mining companies invest in voluntary initiatives to promote development in the countries and communities in which they operate. Nonetheless, there is concern that these intensely publicized activities may serve only to win community support and thus reduce opposition to their core activities, which produce significant environmental damage and pressure on resources, effects which, in turn, are not fully appreciated by the communities that benefit from such voluntary initiatives. Participants at the regional implementation meeting called for independent assessments of voluntary initiatives and corporate sustainability policies.

24. Climate change adaptation and mitigation pose new challenges to mining. Adaptation has a strong bearing on long-term water availability, and mitigation

relates to the net contribution of greenhouse gases associated with the energy-intensive mining operations.

Policy options

25. One necessary step in managing the resources generated by mining activity is to strengthen the capacities of national, subnational and municipal Governments. Moreover, during the regional implementation meeting, participants expressed the need to articulate a regional position on mining that would establish standards for investor companies and require corporations to make a real commitment to local development rather than marginal contributions to social schemes in their areas of operation.

26. Participants also agreed upon the need to advance towards integrated, eco-efficient, environmental management policies throughout the production process. The consideration of mining and metals by the International Panel for Sustainable Resource Management and the project of instituting a global sustainable mining initiative, both led by UNEP, could contribute to advancing sustainability in mining in Latin America and the Caribbean. Initiatives promoted by Governments (including the home-country Governments of major investors), intergovernmental and corporate organizations that promote the reduction of environmental footprints, innovation in waste management, ecosystem risk management, mine closure rehabilitation and other issues may have a positive impact on the sustainability of mining in the region.

27. Participants mentioned the need to implement strategic environmental assessments and stronger zoning and other types of land-use policies, including the establishment of non-mining zones where mining could destroy important or potentially important environmental assets and services and related livelihoods.

28. The importance of engaging multiple stakeholders in decision-making and conflict resolution was also emphasized at the regional implementation meeting. Developing and adopting the ISO 26000 guidelines, due to enter into force in the near future, could help to make the social responsibility efforts of corporations more effective. Despite the complexity of public-private relations in the mining industry, Governments should seek opportunities to collaborate and cooperate with the private sector.

29. The ECLAC document (see para. 3 above) also mentions other types of policies and measures implemented regarding transparency in the handling of information on payments generated by the mining industry, specific regulations (laws, regulations, guidelines) for small-scale mining to enable legal, sustainable and socially responsible practices, effective spillovers into local economies, and policies for addressing the environmental liabilities of mining and for remediating contaminated sites. These policies and measures may serve as references for other countries, including the Awareness and Preparedness for Emergencies at Local Level programme of UNEP.

30. Regarding the use of mercury in gold mining, countries will have to promote the use of alternative substances and establish solid and stable financing mechanisms to do so. International negotiations on a binding regime for mercury, scheduled to begin in Stockholm in June 2010, will be a key factor in addressing

this issue. Countries in the region would benefit from the development of a coordinated regional stance.

31. In terms of climate change, basic steps forward include systematically measuring the carbon footprint and promoting energy efficiency and alternative sources to fossil fuels.

C. Transportation

32. Transportation is a complex industry. It includes passenger and freight transportation by water, air and land (roads and railroads), and combinations of these modes, at the international, regional, national (inter-city and rural-urban) and urban levels. It plays a key role in countries' economic and social development. Effective transportation services and infrastructure are necessary to ensure access to basic goods and services, such as education and health care, and are key issues in trade competitiveness, which in turn affects economic performance. In urban areas, despite some advances, many cities in the region do not have efficient, safe, reliable or accessible urban public transportation systems. There are major sustainability challenges to the expansion of infrastructure, both within and between countries. Transportation in the region is strongly based on fossil fuels and thus generates significant volumes of CO_2 emissions and of particulate material, and is one of the main factors driving the rise in energy demand. Generally, transportation policies and infrastructure development programmes do not take full account of their environmental and social implications.

33. The session on transportation at the regional implementation meeting opened with a presentation by one of the members of the delegation of Guatemala.

Progress and achievements

34. Some of the largest cities in the Latin American and Caribbean region have implemented reforms in public urban transportation, emphasizing intermodality, efficiency and the improvement of passenger services. Some cities have instituted schemes to promote the use of non-motorized vehicles and have invested in networks of urban bicycle pathways. Outside urban areas, a few countries, such as Colombia, with its national logistics policy, have taken steps to develop integrated infrastructure and logistics policies.

35. In terms of fuels and vehicle emissions, the use of leaded gasoline has been eliminated (see section D below). The region has been a leader in the use of alternative fuels. During the regional implementation meeting, participants pointed out that the production of ethanol from sugar cane, in which Brazil has developed expertise over several decades, is based on regionally developed technology that can be implemented locally in many countries, thereby generating jobs and contributing to local economies without affecting food supply. The potential for South-South cooperation in this area was stressed. Participants also mentioned, however, the differences in types of biofuels and in countries' local capabilities of replicating successful biofuel development experiences. The region has benefited significantly from information- and experience-sharing on such global initiatives as the Partnership for Clean Fuels and Vehicles, which was established in 2002 at the World Summit on Sustainable Development to help developing countries reduce air pollution through improvements to fuels and vehicles.

36. Improvements have been made in road transportation safety, in some cases through public-private partnerships and multi-stakeholder participation.

Challenges and constraints

37. Although the need to support more efficient and cleaner modes of passenger and cargo transportation is generally recognized, contradictory policies are still in place. Advances in the sustainability of transportation in the region have been hindered by decision-making and by institutional structures conceived and established prior to the consolidation of the concept of sustainable development — including Principle 4 of the Rio Declaration on Environment and Development, which requires environmental protection to be made an integral part of development processes — and prior to the emergence of climate change as an issue of unequivocal concern on the global agenda. Environmental and social aspects are often not incorporated into transportation policies; moreover, policies on different modes of transportation are frequently separate and uncoordinated, and administrative entities are poorly integrated and connected. Adopting more sustainable transportation models requires strong intra-governmental coordination and support from the State to overcome barriers to the entry of new technologies, methods, management models and professionals.

38. One challenge to improving the quality of fuels is the need to reduce sulphur levels. Of note in this connection is the decision, adopted at the sixteenth meeting of the Forum of Ministers of the Environment of Latin America and the Caribbean, to work with regional organizations and collaborators to reduce the sulphur content of fuels.

39. Although the CO_2 emissions of the region represent only a small fraction of developed country emissions, the level of emissions associated with land transport is high compared with income levels, owing largely to the relatively high number of vehicles per person. Increases have been recorded not only in the overall number of vehicles in the region, but also in the number of vehicles per capita. These increases are due to deficiencies in urban public transportation, which make private transportation the option of choice whenever families can afford it, and to an urban expansion model that has emulated the North American model, which is based on the development of new, detached suburbs connected to urban centres by highways. The elevated level of vehicle emissions is also due to a relatively old fleet that lacks adequate maintenance and is lagging on emissions control technology. If current trends continue, emissions from highway transportation in Latin America and the Caribbean will increase markedly in the coming decades. The practice of importing used vehicles from other countries contributes to both pollution and safety problems.

Policy options

40. Economic instruments, such as taxes on fossil fuels, can affect the choice of transportation mode. For such measures to be effective, however, passengers need to be given options. Therefore, the region must invest in secure, safe and reliable urban public transportation; infrastructure for alternative, non-motorized transportation modes; and the integration of transportation policy with urban development and land use policies, with the goal of achieving more sustainable models. Effective, efficient and sustainable urban public transportation requires the active promotion of

co-modality and investment in infrastructure for non-motorized transportation, such as walking and cycling.

41. Progress can be made in reducing motor vehicle pollution by instituting mandatory standards and technical revision procedures for vehicles, regulating imports of used vehicles, establishing fuel standards and controls and developing alternative fuels. Engaging automobile manufacturers in a life cycle approach is also a key aspect of transportation sustainability in the region and requires international cooperation, given the geographic location of automobile manufacturing plants and the fact that most countries are mainly importers.

42. Most importantly, the region must make progress on integrating infrastructure, transportation and logistics policies and, in the process, incorporate the relevant social and environmental variables and ensure consistency with other policy areas, such as energy. This will require major institutional changes and the establishment of coordinating mechanisms and instruments for supporting both public and private sectors in their efforts to break with the established model.

D. Chemicals

43. The production and use of chemicals has significant economic and social benefits. In Latin America and the Caribbean, chemical products are particularly important in agriculture as a means of controlling insect-borne diseases and pests, and as fertilizers. They also play key roles in pharmaceutical production, food production, manufacturing of cleaning and hygiene products, water treatment, construction and many industrial processes. In some countries, the chemical industry plays a large role in the economy. In the absence of appropriate management and monitoring of these substances, however, water, air and soils are susceptible to contamination by toxic chemicals, which entails high social and economic costs. Exposure to contaminants disproportionately affects such vulnerable groups as the poor, women, children and the elderly, and workers regularly exposed to chemical pollution.

44. The session on chemicals at the regional implementation meeting opened with a presentation by the representative of Jamaica. Jamaica holds the chair of the Latin America and Caribbean Regional Coordinating Committee of the Strategic Approach to International Chemicals Management.

Progress and achievements

45. Considerable efforts have been made to prohibit or restrict the use of certain chemicals, in particular pesticides. Use of aldrin and dieldrin is now prohibited and nearly all countries in the region have prohibited the agricultural use of lindane, although some countries still allow its use as a drug. Dichlorodiphenyltrichloroethane (DDT) is still used in some countries, under applicable international guidelines, as a component of public health measures to control vector-borne diseases. Initial steps have been taken to control mercury contamination with the development of mercury emissions inventories and the transition to alternative products, in particular in health care. The use of leaded gasoline has been eliminated, and countries in the region have been successful in reducing the use of ozone-depleting substances under the Montreal Protocol on Substances that Deplete the Ozone Layer. Underpinned by the Basel Convention on the Control of Transboundary Movements of Hazardous Wastes

and their Disposal, coordinated Government action has enabled the dismantling of illegal transboundary shipments of hazardous wastes to the region.

46. The high rates of ratification of international instruments and participation in international initiatives demonstrate recognition of the importance of chemicals management. Most countries in the region have ratified the Basel Convention, the Rotterdam Convention on the Prior Informed Consent Procedure for Certain Hazardous Chemicals and Pesticides in International Trade, and the Stockholm Convention on Persistent Organic Pollutants. Rational management of chemical products was firmly set on the regional agenda in a declaration adopted by the ministers of health and environment of the Americas at Mar del Plata, Argentina, on 17 June 2005. This commitment was reinforced by active participation in the Strategic Approach to International Chemicals Management and in sessions of the International Conference on Chemicals Management. The Quick Start Programme trust fund has been used to finance projects in 23 countries in the region.

47. Pollutant release and transfer registers are one of the instruments used to produce consistent, integrated data on chemicals. Various national and regional organizations have developed systems within the region to compile and disseminate data on emissions and transfers of toxic chemicals from industrial facilities. Trade agreements have been important drivers of such registers in the region.

48. In the area of transportation of hazardous products, countries in the region have advanced in the implementation of the globally harmonized system of classification and labelling.

Challenges and constraints

49. A number of important issues need to be addressed. Despite the banning of certain pesticides, countries still need to invest in enforcing bans, managing stockpiles of obsolete pesticides and regulating and monitoring pesticide residues in food products. Some parts of the region where persistent toxic substances were produced in the past have critical levels of contamination and the implications for human health in these areas are not yet clear. With regard to heavy metals (see paras. 14 and 30 above), the use of mercury to extract gold remains a problem. Other mercury-related issues include its use in products (for example, hospital products) and industrial processes, storage and management of mercury wastes and management of contaminated sites, as well as its serious health effects on workers. Having eliminated the use of leaded gasoline, countries now need to address other sources of lead poisoning, such as lead in paint. Management of hazardous wastes and levels of accident preparedness are generally inadequate.

50. Illegal transboundary movements of hazardous wastes are known to occur and are sometimes associated with other criminal activities. Rates of reporting under the Basel Convention are low; only one country in the region has ratified the Protocol on Liability and Compensation for Damage resulting from Transboundary Movements of Hazardous Wastes and their Disposal, and few countries have ratified the Ban Amendment of the Basel Convention. Under the Stockholm Convention, relatively few countries have developed national implementation plans and reporting rates are low. Endosulfan, a chemical used in coffee plantations in the region, is being considered for inclusion under the Stockholm Convention and will require additional policy measures. The implementation of the Rotterdam Convention faces bottlenecks in administrative capacity.

51. Despite advances in pollutant release and transfer registers, most countries in the region do not yet have wide-ranging systems with rigorous and systematic data entry that are capable of providing access to, and sharing of, information. There is still scant knowledge regarding the issues involved in such registers. Moreover, the available technical resources (including training at the national and international levels), financial resources and infrastructure for data collection are inadequate, while the relevant legal frameworks in various countries remain fragmented.

52. Implementation of a globally harmonized system of classification and labelling for sectors other than transportation is in the preliminary stages and is patchy. Participants at the regional implementation meeting expressed concern over the trade-distorting potential arising from uneven implementation of a globally harmonized system.

53. In general, despite the high rates of ratification of international instruments, efforts to establish national policy goals have been hindered by significant barriers to implementation. Although these obstacles are specific to each of the issues being addressed, and in spite of the wide disparities within subregions and countries, they can be grouped into the following broad categories:

(a) Lack of information: Few inventories and registries of contaminants are satisfactorily and systematically maintained. Moreover, few wide-ranging, up-to-date studies have been conducted on the effects of chemical contaminants on human health and the environment. The lack of information on the use and disposal of chemical contaminants makes it difficult to raise sufficient awareness of the costs of contamination and inaction and prevents the issue of chemicals management from becoming a priority on the region's policy agendas. Even when the issue is given the priority it deserves, lack of information remains a barrier to the effective management of such substances and to adequate accident prevention and response. Public access to the relevant information, education and awareness-raising programmes is necessary for the effective participation of civil society in efforts to manage these products;

(b) Poor infrastructure: In almost all countries of the region, infrastructure for hazardous waste disposal is precarious. In addition, few laboratories are equipped for monitoring and technological capacity for developing alternative, accessible products adapted to local needs is lacking;

(c) Lack of trained professionals: This is a major bottleneck throughout the region. Deficiencies exist in the public sector, for example among customs officials, and in the private sector, where the problem is concentrated among SMEs. Regarding the negotiation and implementation of international conventions, often a single person is responsible for several conventions, thereby limiting the country's capacity to negotiate effectively and ensure coordination among Government institutions involved in implementation;

(d) Financial resources: Such resources are scarce, in particular in the aftermath of the global financial crisis;

(e) Insufficient mainstreaming and secondary importance within policy agendas: Chemicals management is generally not a priority among countries in the region. Sound chemicals management policies are poorly integrated with other policy areas, such as health, agriculture and labour. Even within environmental policy, chemical contaminants have been a secondary concern, overshadowed by

such global issues as climate change and biodiversity. Policy measures adopted to mitigate climate change have generated chemical management problems. During the regional implementation meeting, reference was made to a World Bank initiative to promote the substitution of incandescent bulbs for compact fluorescent light bulbs, despite the fact that the latter contain mercury and countries are ill-equipped to dispose of them. The secondary position of the chemicals issue on public agendas is reflected in the scarce financial resources devoted to chemicals management both nationally and internationally, and in the fact that institutions working in this area lack the resources and personnel required to effectively implement legal mandates. UNEP has been supporting efforts to improve mainstreaming, which has also been a condition required by donors.

54. With regard to corporate behaviour, participants at the meeting mentioned that although companies publicize their adherence to principles of product stewardship and extended producer responsibility for the benefit of countries that are primarily importers, producers take little action in this regard. In addition, the policies of exporting countries do not ensure that the end-of-life-cycle concept is applied in the importing country. Specific mention was made of the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH) regulation of the European Community.

Policy options

55. Advances in chemicals management require each of these barriers to be addressed. Regional priorities in chemicals management and areas for policy action, including a regional implementation plan for the Strategic Approach to International Chemicals Management, will be discussed at the second Latin American and Caribbean regional meeting on the Strategic Approach, to be held in March 2010. In an information paper submitted on behalf of the Regional Coordinating Committee of the Strategic Approach, the regional focal point proposes the following topics for consideration and discussion by countries at the second regional meeting: further engagement of the subregional integration bodies (CARICOM, the Andean Community and MERCOSUR) in the development and implementation of programmes on sound chemicals management; stronger emphasis on the mainstreaming of sound chemicals management into national sustainable development plans and programmes; an increase in the donor base, in particular at the regional level; increased involvement of the relevant regional development agencies, including the Pan American Health Organization, ILO, the Food and Agriculture Organization of the United Nations and ECLAC, in implementation of the Strategic Approach at the national, regional and subregional levels, and in particular in capacity-building activities; and the development of national plans for implementing the Strategic Approach. Countries will also have to assess the implications of the emerging policy issues defined under the Strategic Approach: nanotechnology and manufactured nanomaterials; chemicals in products; electronic waste; and lead in paint.

56. Technical cooperation and funding for chemicals management are crucial. The Quick Start Programme has a limited duration and is restricted to enabling initial capacity-building and implementation activities. New funding sources must be put in place to advance beyond the initial stages of implementation of the Strategic Approach. The donor base needs to be broadened, including through the involvement of national and regional development banks; North-South and South-

South cooperation must be enhanced and regional cooperation should be encouraged and supported; and funding must be ensured for the regional centres for the implementation of the Stockholm and Basel Conventions. Several participants stated their support for the opening of a chemicals window in the Global Environment Facility (GEF) in the context of the negotiations on the fifth replenishment of the GEF Trust Fund.

57. Countries in the region must be prepared for negotiations that will be conducted in the framework of the simultaneous extraordinary meetings of the Conferences of the Parties to the Basel, Rotterdam and Stockholm Conventions, to be held in Bali, Indonesia, in February 2010; and for negotiations on a binding agreement on mercury. In both cases, ensuring adequate funding, under the principle of common but differentiated responsibilities will be critical for implementation of the agreements. Participants at the regional implementation meeting requested support to prepare for and attend these negotiations.

58. While participants at the regional implementation meeting called for greater stakeholder involvement in chemicals management, they also cautioned against leaving too much responsibility in the hands of large corporations in the industry, and called for a strengthening of State presence and State regulation. Support is required for SMEs to implement adequate chemical management strategies.

59. Finally, participants raised the issue of adequate remuneration for the benefits of traditional knowledge and for the use of biodiversity in developing chemical products, and emphasized the need to reach a fair and equitable agreement on access and benefit-sharing under the Convention on Biological Diversity.

E. Waste management

60. Although progress has been made over time, waste management remains one of the greatest environmental, health and social challenges in Latin America and the Caribbean. In many areas, major gaps exist in such basic services as waste collection and disposal. Collection is often incomplete or insufficient, and open-pit dumps are common. Even where collection is adequate, disposal is often not. Clandestine dumps continue to be a major problem, with adverse implications for health, pollution, soil degradation and the attractiveness of potential tourist destinations. Although exceptions exist in higher-income areas, in general, local authorities are poorly funded and poorly equipped to cope with the challenges of waste management. In large urban centres, the problem has been aggravated by high rates of population growth without the necessary long-term planning. As seen in section D above, the management of hazardous waste, including obsolete pesticides, is still deficient, and the region remains a destination for trafficking in hazardous wastes. Despite the improvements made in some countries, hospital wastes and other hazardous residues are inadequately managed and often dumped along with household waste. Incineration is the method most widely used to treat hospital wastes, but equipment and procedures are often inadequate.

61. The session on waste at the regional implementation meeting opened with a presentation by the representative of Cuba.

Progress and achievements

62. Significant progress has been made in legislation and public policy on solid waste management and disposal. Awareness of the importance of these issues has increased and has led to progress in various areas, from waste collection and disposal in sanitary landfills to recycling and methane recovery for energy generation. In higher-income areas, where local public resources are sufficient, and particularly where collection services have been privatized, collection is generally adequate. Advances have also been made in the area of industrial waste through new regulations, enforcement measures, environmental recovery programmes and monitoring by authorities and civil society. Many transnational corporations that use standard technologies for waste treatment and recovery and follow international codes of conduct are demonstrating the viability of sustainable practices. In specific industries, such as metals and paper, there is now a high level of recycling, which has itself become a significant economic activity. Co-processing has become more common in the cement industry. Exchange systems for industrial by-products have been established. Some countries have implemented methane recovery projects. The clean development mechanism under the Kyoto Protocol has played a role in the progress made, as has the Methane to Markets Partnership. Although trafficking in hazardous wastes is still a reality, as mentioned above, countries have started to react by launching successful initiatives to dismantle these operations, supported by the Basel Convention (see section D above). Customs officials in several countries are receiving training in this area through the Green Customs Initiative, among other schemes.

Challenges and constraints

63. The region has had some difficulties with the legal and institutional structure for domestic waste management. Waste management, from collection to disposal, is often a legal responsibility of local (municipal) Governments. Depending on the area, this can be a problem for two main reasons. Firstly, municipalities, particularly in lower-income areas, are often poorly resourced. High poverty rates have an impact both on the resources available to municipalities and on the possibility of charging for services. Secondly, much as in the sanitation sector, the fragmentation of waste management along municipal borders hinders economies of scale and the efficient management of waste collection and disposal services. Moreover, regulations on environmental aspects are sometimes obsolete or inadequately enforced.

64. One problem that occurs in areas where waste disposal has been privatized is the perverse incentive embedded in certain concession contract models, whereby companies' remuneration is proportional to the volume of waste, which in effect eliminates incentives to promote reduction at source, recycling and other waste generation reduction measures.

65. With the exception of specific industries, recycling efforts are still sparse. Plastics, in particular, have proven difficult to recycle. Participants at the regional implementation meeting suggested assessing the social costs of the use of plastics, in order to consider possible measures to reduce their use. Participants also referred to the important role, but the precarious social condition, of informal recyclers who earn a living by collecting waste from dumps. Large numbers of people, including children, live on and make their living from dumps.

66. Regarding industrial waste management, although there have been successful cases of public-private partnerships and of active involvement of the industry in waste management, participants at the meeting also reported that companies have actively lobbied and interfered politically with groups of Government officials attempting to promote projects that would have increased corporations' responsibility for their production-related waste.

67. Improvements in the regulation of hazardous waste management have yet to be matched by the necessary infrastructure. Because several countries have only a single hazardous waste treatment plant, waste must be transported over long distances, with the attendant high costs and risks. The region continues to receive illegal shipments of hazardous waste, which is a particularly important issue for the Caribbean island States. Participants reported that countries often import scrap material or used equipment from other regions and that, although these operations are often described by exporters as beneficial to the recipient countries, they in fact generate high costs and risks.

68. The obstacles to methane recovery include the need to find markets for the energy generated in this process, the availability of technology and the need to invest in adequate infrastructure. Producing electricity from waste requires moving from first-generation landfills, which are simply a substitute for open dumps, to second-generation operations, which include bioreactors. Most of the region is still at the first-generation stage. Developed countries are implementing a third-generation approach using sustainable landfills or biocells.

69. Participants referred to the management of waste produced by such extreme weather-related events as hurricanes, the frequency of which tends to increase with climate change. Among the problems mentioned were the large volumes of debris from destroyed buildings and the disposal at sea of bottles containing polyethylene terephthalate (PET) and plastic bags used to store water and other products in hurricane preparation periods. One participant reported the findings of a recent study, supported by the United Nations Development Programme, showing that poor disposal of hazardous wastes, especially in rural areas, was a key factor in the pollution and damage caused by extreme weather-related events.

70. Another issue discussed was the link between waste generation and consumption and production patterns. While the region is largely poor, a significant number of people have access to consumer goods and, as in other parts of the world, consumption patterns include frequent substitutions of equipment in response to producer policies of successively launching new products, thereby rendering fully functional products obsolete within a very short period of time. Participants suggested that both consumer and producer behaviours should be reviewed.

71. The issue of financing was raised as a major challenge in several areas. Participants stressed both the limited financial capacity of Governments in the region and the insufficient funding for waste management provided by international institutions and mechanisms.

Policy options

72. The institutional challenges related to the municipal fragmentation of waste management require coordination and cooperation mechanisms among municipalities, with the involvement of subnational or national entities. At the same

time, institutional capacity-building is necessary at all levels of government and needs to be a continuous process.

73. Innovative models of collection and disposal management, including those that involve the private sector through concession contracts, can be explored, but careful consideration must be given to the inclusion of provisions on the various segments of the waste management chain to avoid such inconsistencies as giving waste disposal companies incentives to receive large volumes of waste.

74. Several participants stressed the importance of, and successful experiences with, education and awareness-raising in regard to waste management. Awareness can contribute both to society's capacity to demand solutions from corporations and Governments and to improvements in domestic behaviour through waste reduction at source and recycling. The potential of such economic instruments as taxes on plastic bags or deposit-return schemes to influence consumer and producer behaviour was mentioned. In regard to consumption and production patterns, participants also referred to efforts being undertaken in the European Union to reduce continual changes of equipment, which could serve as an example for the region.

75. Participants also pointed to a need to involve producers more extensively, through a life cycle approach, and to extend producer responsibility to the waste disposal stage.

76. Regarding trafficking in hazardous wastes, participants stressed the need to enhance entry and exit controls at ports and to provide more training for customs officials. They also called for regional cooperation on this issue.

77. Specific issues were raised regarding the Caribbean island States, such as the need to urgently address waste trafficking and to invest in waste reduction in the light of the small amount of disposal space available, and matters related to the marine pollution generated by extreme weather events, to which these States are particularly vulnerable.

78. Participants called for greater funding from international sources.

II. Interlinkages and cross-cutting issues

79. During the regional implementation meeting, participants highlighted the cross-cutting nature of sustainable consumption and production, but also of chemicals and waste management, which affect both each other and the sustainability of mining and transportation. The broad issue of sustainable consumption and production has the strongest and most obvious interlinkages with the other thematic areas to be addressed by the Commission on Sustainable Development at its eighteenth and nineteenth sessions. Despite the diversity of thematic areas, many common challenges were identified during the meeting and in the preparation of the ECLAC document (see para. 3 above), and are described below.

Information, education and awareness

80. Advances in all of the thematic areas require efforts to produce information and knowledge on the relevant issues, to make that information accessible, to raise

awareness and to train professionals. Investing in the quantification of the costs of environmental and social problems arising either from certain activities, such as mining in some areas, or from inaction, for instance in regard to human exposure to toxic chemicals, is crucial to ensure that these issues are adequately funded and accounted for and mainstreamed into broader policy frameworks.

81. Regarding efforts to move towards sustainability, participants referred to the importance of recovering traditional values and knowledge and of avoiding the replication of foreign models that are incompatible with the region's needs and resources.

Strengthening of State capacities

82. Despite recognition of and support for the role of multiple stakeholders in addressing each of the thematic issues, participants also emphasized the need to strengthen State capacities to monitor, enforce, manage and negotiate with other countries and companies. Many countries are still suffering the effects, at the national, subnational and municipal levels, of the contraction and weakening of the State apparatus over the past decades.

Potential for public-private partnerships and multi-stakeholder involvement

83. Public-private cooperation is key to advancing towards sustainable development. Such partnerships are crucial in translating policy goals and legal provisions into concrete action; in the transfer of technology; in the development of productive linkages between extractive activities and local economies; and in ensuring financing for critical issues related to corporate activity, among others. Countries and representatives of major groups at the regional implementation meeting stressed the potential role of such groups in supporting efforts by States to move towards sustainable development. Participants stressed, however, that the State has a unique role in which it cannot be replaced by non-State actors.

Potential for regional cooperation

84. Countries can benefit from different forms of regional cooperation in pursuit of the various policy goals falling within the scope of the thematic areas to be addressed by the Commission on Sustainable Development at its eighteenth and nineteenth sessions. Among others, these may include (and in some cases have already included) regional articulation in international negotiations and the consolidation of common positions on issues of common concern; the exchange of successful experiences in achieving similar policy goals; the adoption of common standards to avoid any distorting effects of policy measures on investment or trade; and common policies for the integration of infrastructure under the concept of sustainability. The increasing importance of South-South cooperation was also emphasized.

Need for a subregional approach

85. The Forum of Ministers of the Environment of Latin America and the Caribbean reaffirmed, as at previous regional implementation meetings, that it was important to take a subregional approach to the issues on the agenda, considering the diversity of the Caribbean, South America, Central America and Mexico. Whereas diversity exists within these groupings as well, a subregional approach will

be useful in exploring issues of common interest to groups of countries, while taking due consideration of the concerns and challenges of smaller countries.

Cooperation, financing and technology transfer

86. Cooperation, financing and technology transfer are key issues in efforts to ensure that policy goals and internationally agreed commitments are translated into effective action. The absence of adequate technology is often a major factor impeding the efficient and environmentally safe use of resources. Cooperation in this regard is crucial, provided that the specificities of local circumstances are taken into account. To the extent possible, incentives for the generation of local technological capacity should be offered so that solutions match local needs. Financing is a major issue in advancing towards sustainability in all of the thematic areas to be covered by the Commission on Sustainable Development at its eighteenth and nineteenth sessions. In many cases, international commitments have been undertaken and national policy goals have been established accordingly, but without the necessary funding to ensure implementation. At upcoming international negotiations on new issues, such as the internationally binding agreement on mercury, or on those already on the international agenda, such as climate change, efforts must be made to ensure that financial resources match commitments, under the principle of common but differentiated responsibilities. The negotiations for the fifth replenishment of the GEF Trust Fund must consider the increasing demands being placed on the countries of the region.